A CLOSER LOOK AT WOMEN'S COLLEGES

National Institute on Postsecondary Education, Libraries, and Lifelong Learning

Office of Educational Research and Improvement
U.S. Department of Education

A CLOSER LOOK AT WOMEN'S COLLEGES

Irene B. Harwarth
U.S. Department of Education
Editor

Introduction

A Closer Look at Women's Colleges

Irene Harwarth

U.S. Department of Education

Why Study Women's Colleges?

The landscape of higher education has changed dramatically over the past few decades. More students are attending higher education institutions part-time, more students of nontraditional age are pursuing opportunities in higher education, and there is more racial and ethnic diversity on college campuses today than ever before. One of the more

important changes is that women are now the majority of students at the postsecondary level. Therefore, the study of how women progress and succeed in our higher education institutions is vital to the continued success of the American system of postsecondary education.

To assess the current status of American women in higher education, we must first understand the history of women in higher education, and an important part of that history involves institutions known as women's colleges. A *women's college* is defined as an institution where there is an institutional mission to serve the needs of women in higher education as well as a predominantly female student body. Over a century ago, women's colleges played a large role in the higher education of women, because of the very low number of higher education institutions that would allow women to matriculate. But as the number of coeducational institutions rose over the years, women's colleges lost influence over the higher education of women.

Women's colleges are mostly private 4-year colleges, and private 4-year colleges have decreased as a proportion of the higher education universe. In contrast, the number of public colleges, especially 2-year colleges, has increased, and today public institutions educate the majority of female college students. The actual number of women's colleges has dropped from approximately 300 in 1960 to about 80 in 1998, but the majority of the women's colleges that have maintained their educational mission of serving the higher education needs of women have seen increasing enrollments over the past few years.

(Table I-1, below, shows enrollment data for most of those colleges.) These institutions have also been the subject of increased attention. The women's colleges that have remained true to their institutional mission of serving women, and have survived the rising competition from coeducational private and public institutions, are interesting to study due to their success in educating women, as well as their resilience as institutions.

Table I-1BTotal Enrollment at Selected* Women's Colleges: Fall 1993 and Fall 1995

Institution	ST	FALL 1993	FALL 1995	% CHANGE
Mount Vernon College	DC	378	555	46.8%
Trinity College	DC	1,235	1,683	36.3%
Rosemont College	PA	585	758	29.6%
Mount Saint Mary's College	CA	1,535	1,974	28.6%
Sweet Briar College	VA	570	731	28.2%
Chatham College	PA	623	780	25.2%
Carlow College	PA	1,865	2,320	24.4%
Scripps College	CA	576	695	20.7%
Mississippi University For Women	MS	2,585	3,071	18.8%
College Of Saint Elizabeth	NJ	1,484	1,762	18.7%
Emmanuel College	MA	1,332	1,553	16.6%
Regis College	MA	1,160	1,336	15.2%
Mary Baldwin College	VA	1,327	1,508	13.6%
College Of New Rochelle	NY	6,100	6,762	10.9%
Lesley College	MA	5,871	6,506	10.8%
Blue Mountain College	MS	390	432	10.8%
Salem College	NC	830	915	10.2%
Smith College	MA	2,937	3,189	8.6%
Simmons College	MA	3,334	3,614	8.4%
Saint Mary's College	IN	1,466	1,579	7.7%
College Of Saint Catherine	MN	2,588	2,783	7.5%
Marymount Manhattan College	NY	1,773	1,888	6.5%
Hollins College	VA	1,059	1,124	6.1%
Meredith College	NC	2,345	2,477	5.6%
Brenau University	GA	2,120	2,225	5.0%
Saint Mary-Of-The-Woods College	IN	1,187	1,245	4.9%
Converse College	SC	1,121	1,175	4.8%
Columbia College	SC	1,249	1,307	4.6%
College Of Notre Dame Maryland	MD	3,077	3,214	4.5%
College Of Saint Benedict	MN	1,818	1,897	4.3%
Moore College Of Art And Design	PA	362	377	4.1%
Chestnut Hill College	PA	1,151	1,197	4.0%
Barnard College	NY	2,197	2,277	3.6%
Bay Path College	MA	578	596	3.1%

Cedar Crest College	PA	1,543	1,585	2.7%
Mills College	CA	1,138	1,166	2.5%
Wilson College	PA	875	894	2.2%
Randolph-Macon Woman's College	VA	709	724	2.1%
Wesleyan College	GA	428	435	1.6%
Texas Woman's University	TX	9,702	9,852	1.5%
Agnes Scott College	GA	600	608	1.3%
Bryn Mawr College	PA	1,810	1,821	0.6%
Hood College	MD	2,061	2,067	0.3%
Midway College	KY	943	926	-1.8%
Harcum Junior College	PA	736	722	-1.9%
Georgian Court College	NJ	2,580	2,509	-2.8%
Mount Holyoke College	MA	1,951	1,896	-2.8%
Trinity College	VT	1,099	1,062	-3.4%
Wellesley College	MA	2,351	2,257	-4.0%
Spelman College	GA	2,065	1,961	-5.0%
Peace College	NC	447	424	-5.1%
Saint Joseph College	CT	2,022	1,916	-5.2%
Mount Mary College	WI	1,533	1,444	-5.8%
College Of Saint Mary	NE	1,168	1,096	-6.2%
Judson College	AL	320	300	-6.3%
Alverno College	WI	2,557	2,391	-6.5%
Seton Hill College	PA	962	899	-6.5%
Bennett College	NC	664	620	-6.6%
Wells College	NY	415	385	-7.2%
Marymount College	NY	1,101	1,005	-8.7%
Stephens College	MO	987	889	-9.9%
Russell Sage College Main Campus	NY	4,217	3,766	-10.7%
Immaculata College	PA	2,348	2,053	-12.6%
Notre Dame College Of Ohio	OH	794	693	-12.7%
Cottey College	MO	370	320	-13.5%
Pine Manor College	MA	400	344	-14.0%
Ursuline College	OH	1,563	1,312	-16.1%
Aquinas College At Milton	MA	349	254	-27.2%
Aquinas College At Newton	MA	303	170	-43.9%

*****In the report *Women's Colleges in the United States: History Issues and Challenges*, 76 institutions were identified as having a mission to serve women. These institutions also reported data to the U.S. Department of Education consistently from 1978 through 1993 independent of other institutions, therefore allowing for trend analysis of data in that publication. Of those 76 institutions, the 69 in this table were identified by the Women's College Coalition (WCC) as currently having a mission to serve the educational needs of women. Mount Vernon College was acquired by The George Washington University in 1996.

Source: Harwarth, Irene, Mindi Maline, and Elizabeth DeBra. *Women's Colleges in the United States: History, Issues, and Challenges.* Washington, DC: U.S. Government Printing Office, 1997;U.S.Department of Education, *1997 Directory of Postsecondary Institutions, Volume I.* Washington, DC: U.S. Government Printing Office, 1998.

Purpose of the Roundtable and Publication

This publication is based on the roundtable discussion, "A Closer Look at Women's Colleges," which was held on January 15, 1998, in Washington, DC. Select education researchers from around the country were invited to participate and react to four commissioned papers presenting current research on women's colleges, as well as to discuss research issues pertaining to women's colleges and their place in the higher education community.

The purpose of the roundtable was to review past research regarding the merits of a women's college education, and to explore what new research will be helpful in the future. During the roundtable, participants explored such questions as:

- What does the research tell us about the reasons women choose to attend women's colleges?
- What special programs have women's colleges introduced to attract more minority female students?
- In what areas are women who attend women's colleges satisfied/not satisfied with the education they receive at these institutions?
- What lessons learned with respect to the education of women at women's colleges could be transferred to coeducational institutions to increase the academic, leadership, and career success of women at coeducational institutions?

The roundtable was organized jointly by the National Institute on Postsecondary Education, Libraries, and Lifelong Learning (PLLI) in the U.S. Department of Education's Office of Educational Research and Improvement (OERI) and the American Association of University Women Educational Foundation (AAUWEF). The issues raised for discussion at the roundtable were identified by PLLI and AAUWEF staff, with the advice of researchers involved with the study of women's colleges. These issues were seen as not only key topics in the study of these institutions, but also as topics pertaining to research already available, allowing a starting point for discussion.

For PLLI, the January roundtable on women's colleges offered a chance to follow-up on a report released in June of 1997, *Women's Colleges in the United States: History, Issues, and Challenges*. This report provided a brief history of women's colleges, statistics, and a discussion of the institutional effects of women's colleges, and quoted findings that women's colleges lead to increased leadership skills in young women and to more successful professional outcomes. However, the development of this report, and its subsequent publication, provoked more questions than could be answered in one volume. How can women's colleges be assessed, compared to other colleges, when women's colleges are such a small part (1 percent) of the higher education universe? What are the backgrounds of women who choose to attend women's colleges? Are these women satisfied with the education they receive at these institutions? How well do different types of women's colleges serve the needs of their student populations? How well are

women's colleges dealing with racial/ethnic diversity issues? What efforts are women's colleges making to attract and retain students and faculty who are members of racial/ethnic minorities?

The AAUWEF was also interested in these issues. As an organization that has had a long history of supporting women in higher education, the AAUWEF sponsors fellowships for female scholars from around the country. The AAUWEF noted that many of the successful women who have been awarded these fellowships were from women's colleges. Of paramount importance to both the AAUWEF, and PLLI, is identifying research findings on women's colleges that can be used to improve the educational experience of women at the coeducational institutions that make up the vast majority of institutions of higher education.

The following is a synopsis of the papers presented at the January roundtable, the discussions provoked by these papers, and suggestions for a future research agenda that were inspired by both the papers and the discussion. Appendix A contains a participant list for the January roundtable.

Women's Colleges and Educational Outcomes

Paper and Discussion

M. Elizabeth Tidball opened the roundtable discussion with a presentation on her paper, "What Is This Thing Called Institutional Productivity?" Tidball has been a pioneer in educational research in studying the outcomes of women who attended women's colleges as a part of her interest in women achievers. For this paper, she analyzed data from the National Science Foundation's (NSF) Doctorate Record File Compilation of 1991 on individuals who graduated from college during the 1970s. She looked at the number of women from women's colleges of various levels of selectivity who went on to obtain their doctorates. Tidball concluded that being at a college for women is an important factor in women's subsequent success, and the productivity of women's colleges is disproportionally greater than their selectivity.

Participants reacted to this paper by questioning how productivity or "success" is measured, and raising concerns about using Doctorates as a measure of success, suggesting that law degrees, and MD degrees and MBAs could be considered measures of successful educational outcomes. They also raised the issue of what happens in the classroom and how that can be used as a measure of success. As one participant asked: "What is it that constitutes the experience of making a woman creative? Making a woman analytical? Making a woman competitive, in terms of her abilities?" There may

be a difference between the classroom experiences of women at women's institutions, coeducational institutions, and special mission institutions that create the conditions that bring out the best in women. This participant added that we should not lose sight of these classroom experiences as we discuss campus conditions and educational outcomes for female students.

Another participant raised achievement of any college degree as a measure of success. There is already research indicating higher earning power, better health, etc., with the earning of a college degree. One public policy issue that is a priority in the higher education community is enhancing successful educational outcomes for minority women. For example, recent statistics show a high college dropout rate for Hispanic women. This participant suggested that coeducational institutions should look at what "enables women to succeed."

Participants also discussed the issue of studying the success of women graduates in traditionally male-dominated fields, such as mathematics. Historically Black Colleges and Universities (HBCUs) have been very successful in graduating minorities in the field of mathematics. If other higher education institutions want to learn how to improve in this area, they can study the HBCUs.

Issues For Future Research

Develop alternative definitions of success for higher education graduates. Now that there are much larger numbers of women attending institutions of higher education, it is more important than ever that there is study of strategies that lead to successful educational outcomes for women. There was agreement that we need to find ways to measure the contributions of female college graduates to society, not only economically, but socially as well.

Study the impact of women's colleges on students' achievements and careers in mathematics and science. There was agreement among the participants that one area in which success at women's colleges could be transferred to coeducational institutions was in the area of mathematics and science. One of the problems with transferring successful strategies at women's colleges to coeducational institutions in this area is that it would be difficult to immediately change the faculties at coeducational institutions. One participant pointed out that a large proportion of the mathematics and science faculty at women's colleges are female, while at coeducational institutions the great majority of faculty in these areas are male.

Women's Colleges and Student Satisfaction

Paper and Discussion

Emily Langdon presented her paper "Who Attends a Women's College Today and Why She Should: An Exploration of Women's College Students and Alumnae." In her paper, Langdon analyzed two sets of data collected by the Cooperative Institutional Research Program (CIRP). She found women students satisfied with their classroom experiences, the facilities, services, and the climate at women's colleges more than women who attended comparable coeducational institutions. This satisfaction was not only present at graduation, but also five years later. Langdon noted that women who attended women's colleges had different reasons for attending college in the first place when compared to their peers at coeducational institutions. Women who chose women's colleges stated that they did so because they wanted to be a more cultured person or because a role model encouraged them to go on to higher education. Langdon interpreted these responses as evidence of a more "holistic" view, a look at the long-term effects of attending college, a consideration for the special atmosphere of a women's college. Langdon concluded by summarizing that the data she saw on women who attended women's colleges indicated that they would attend a women's college again if they were making the choice today.

There was discussion about assessment of student achievement in higher education in relation to student background, and how some researchers have dismissed successful

educational outcomes at women's colleges as being related to the socioeconomic backgrounds of the women attending these institutions. Participants raised concerns about these perceptions of student achievement at women's colleges, and noted that researchers generally do not discount positive results at prestigious coeducational institutions because these schools attract students with higher socioeconomic backgrounds. Participants wondered why women's colleges were being judged differently in this regard.

Participants also raised concerns that women of nontraditional age were often ignored in research on women at women's colleges. One participant asked if, when considering issues such as student satisfaction, researchers have looked at different age groups. In her work she has found that only twenty-five women's colleges have a student population of 80 percent or over of traditional-age student population. Women of nontraditional age at women's colleges are a minority, but a significant minority. The research on these women is qualitative, usually involving stories of changes in their lives through their experiences at women's colleges. Participants discussed how there could be further research on these women, perhaps through the gathering of statistics.

Langdon reported that her statistical study had been based on women of traditional student age. But in reviewing literature and studying the institutions, she had found that women's colleges are leaders in responding to the needs of women re-entering higher education. She concedes that the database she used in her research, CIRP, is focused on

the traditional-aged student. The surveying takes place during orientation, and since a lot of nontraditionally-aged students do not go to orientation, they do not get surveyed. CIRP does not include women who attend "weekend college" programs. Langdon concluded that researchers are missing a large group of women.

One participant discussed the issue of lifelong learning by pointing out that some women's colleges have expanded the career planning office into things such as a "lifetimes" center, providing services to alumnae. There was agreement that in the areas of career planning and alumnae services there are various ways women's colleges have been responsive to the needs of women graduates over their lifetimes. The participants believed that these strategies, as well as the importance of networking, should be studied.

Ideas for Future Research

Examine the impact of contacts made by students at women's colleges on their future careers. Given the high level of student satisfaction that Langdon found at women's colleges, is there evidence that female students at women's colleges develop better "networks" with their peers than women at coeducational institutions? Are women graduates from women's colleges more likely to be active alumnae than women graduates of coeducational institutions?

Develop a database or use existing ones to facilitate research for long-term studies of education at women's colleges. Two participants in particular were very concerned about the lack of quantitative data for the study of women's colleges. One pointed out that researchers were examining the same database over and over and reaching the same conclusions. A new or enhanced survey, or a new database, could possibly be able to provide new information. Another participant stated that it would be useful to be able to encourage oversampling of women's colleges in current large statistical studies. There was agreement among the participants that quantitative, as well as qualitative studies were necessary to further assess the impact of women's colleges on their graduates.

Institutional Characteristics of Women's Colleges

Paper and Discussion

Lisa Wolf-Wendel gave a presentation based on her paper "Research Issues on Women's Colleges." In this paper, Wolf-Wendel described case studies of two women's colleges--Bryn Mawr College, a "Seven Sisters" college in Pennsylvania with a large endowment, and the very different Bennett College, of North Carolina, a Historically Black College, with fewer resources. Yet both institutions, Wolf-Wendel found, have created environments in which women are encouraged to succeed academically. Wolf-Wendel identified seven factors prevalent on both campuses: well-defined and clearly

communicated missions; high expectations; some degree of personal support; positive role models; a large number of women available as colleagues; ample opportunities for women to hold leadership positions; and inclusion of women in the curriculum. Wolf-Wendel concluded in her paper that it is the combination of these characteristics that make both of these institutions so successful at meeting the educational needs of women, despite their different levels of resources and their different student populations.

Participants pointed out that most women attend coeducational public colleges. In many parts of the country these institutions are the only higher education choices available for women. There was interest in the issues Wolf-Wendel raised about how certain characteristics of institutions can enhance an institution's ability to meet women's educational needs. How can the positive factors associated with attending a women's college, such as those identified by Wolf-Wendel's research, be applied to the large number of women who attend coeducational institutions?

Tidball replied that researchers must provide coeducational institutions with the information they need in order to develop strategies that take women seriously, that is, that allow women to make the most of their potential. Interest in the success of women students must come from the top, for example, if the institution's trustees take women seriously at a school it affects the entire school culture. Women must assume leadership, whether in government organizations or coeducational higher education institutions.

Langdon raised other findings from her analysis of CIRP data revealing that women who were satisfied with their education at women's colleges were also concerned with issues such as faculty diversity and books by women included in the curriculum. Increasing faculty diversity and increasing the visibility of women in the curriculum are ways coeducational institutions can better serve their female students.

Wolf-Wendel stated that institutions need to be purposefully coeducational. There has to be an understanding that both men and women will be educated in this environment. She found that regardless of whether an institution was a women's college or not, if women believed that their institution cared about student learning, diversity and gender equity, and civic involvement and social issues, women at both types of schools tended to have positive outcomes. However, women at women's colleges were more likely than women at coeducational institutions to believe that their institution cared about issues such as diversity, civic involvement, and gender equity. This is an important point because coeducational institutions that are purposeful about educating women and people of color can have a positive impact. This attitude is vital, students have to recognize that their institution has a purpose of educating everybody.

Ideas for Future Research

Compare institutional characteristics and outcomes of students who attend different types of women's colleges--4-year, 2-year, public, private and/or religious, historically black or tribal institutions. Participants were well aware of the diversity among women's colleges and agreed that there need to be more case studies. These case studies could focus on Catholic women's colleges and the lesser-known women's colleges that do not often get studied. There was also agreement that there needs to be more research comparing women's colleges with other special mission institutions. Like women's colleges, Historically Black Colleges and Universities (HBCUs), have had great success in graduating women and minorities in traditionally male-dominated fields, such as mathematics and science, and in graduating women who go on to obtain doctorates. It would be useful to mainstream coeducational institutions to learn from women's colleges why special mission institutions are so much more successful in producing women and minority students who go on to other achievements in these areas.

Identify examples of women's colleges' success in producing positive outcomes with limited financial resources. Participants agreed that there is a need to further study the impact of resources. Women's colleges that have been successful with fewer resources could offer models for other institutions that will be facing resource problems in the future. It was suggested that researchers look at expenditure per student, particularly for institutions that are successful for blacks and Hispanics. The importance of this research

would be that institutions that have graduated a disproportionate number of women who, for example, became doctors, or were listed in *Who's Who* publications, are places that could be models for other institutions. These models would provide strategies that might be transferable to coeducational institutions. Participants raised concerns that the higher education community is now more and more dependent on listings and rankings, and the places that already have the resources tend to be on top. Tribal colleges, HBCUs, Hispanic-Serving Institutions (HSIs) and women's colleges deserve more recognition of what they are doing and how they could do even better with additional resources.

Evaluate the impact of women's colleges on non-traditional students and diverse populations. Include experience with distance education, lifelong learning and "gateway" programs. Most women's colleges have developed what some call "gateway" programs for nontraditional students. Participants pointed out that the women's colleges having the most success with nontraditional students have been the Catholic colleges. They are in urban areas, and have always had a mission to serve the socioeconomically disadvantaged. Some selective women's colleges have programs for nontraditional students, but these programs are rarely adapted to meet nontraditional students' special needs such as flexible schedules, daycare, etc. Also, most of the selective women's colleges have high tuition and this limits their enrollment of nontraditional students. The Catholic women's colleges provide a variety of ways in which a woman can study at the college, and there are also support structures for these women. While these schools have become more secular over the years, they have

continued to serve older and lower-income women and they continue to take that mission seriously. It was agreed that the impact of alternative programs (such as weekend colleges and distance learning programs) on nontraditional students is an area that has not been sufficiently studied.

Faculty and Diversity Issues at Women's Colleges

Paper and Discussion

In her paper, "Diversity and Women's Colleges," Beverly Guy-Sheftall described strategies by women's colleges to increase the number of racial/ethnic minority women on their faculties. For example, at Smith College, the "Smith Design for Institutional Diversity" was strongly supported by the Board of Trustees and the college President. Because this policy came from the very top, it represented a serious commitment to increasing opportunities for racial/ethnic minority women throughout the campus. Specific goals were set and resources such as funds and personnel were dedicated to these goals. Guy-Sheftall provided this program as an example of a possible model for other women's colleges. Diversity, Guy-Sheftall concluded, must reach beyond the student body. It must be a compelling goal at all levels of the college structure. In addition to assuring a racially and ethnically diverse student body and faculty, women's colleges must also closely examine their curriculum to make sure not only women are included,

but also the many differing views of various racial and ethnic minorities in American society.

Participants discussed the challenges involved in assessing the effects of attending a women's college on diverse populations. Langdon described her experience working with Hispanic students at Mount St. Mary's College in California, and noted that many minority women tend to shy away from participating in surveys and studies, and this skews the samples that researchers use. One participant talked about an alumnae weekend she convened for minority women who had not come to alumnae events at her institution. These women, some now very successful, had always considered their time at their women's college as a source of "pain." They had never talked about their feelings before that weekend. The talks that these women had on that alumnae weekend allowed them to express this pain and to realize that others had experienced the same sense of discontent. This revelation allowed them to feel better about their institution and their experiences.

Some participants felt strongly that there are difficulties for all women at women's colleges. For example, one participant identified a "generational clash" for minority women at some women's colleges between those who made up the small numbers of women who enrolled before the sixties who tried to blend into the landscape, and members of a later, more numerous group who wanted to assert a cultural identity.

Another source of pain for women at women's colleges has been confusion about sexual identity due to negative stereotypes about women who prefer all-women educational settings. Wolf-Wendel noted that as housing director at a women's college she saw suicide attempts, eating disorders, abusive relationships, and homophobia, which sometimes resulted in women putting themselves in dangerous situations to prove their heterosexuality. These issues must be further studied.

Guy-Sheftall concluded by stating "when we use race and ethnicity as major categories of analysis, I think most of our deeply-held assumptions about women's colleges begin to fall away. I think for me that is the major challenge for researchers over the next decade, to disrupt some of the assumptions that we make about women's colleges, because we have asked a fairly narrow set of questions."

An example was raised describing how at one predominantly white women's college, one researcher found a reluctance to discuss the perspectives of black or Hispanic women because there was a belief that "we are all women." There was understanding that women could have a different perspective from men, but not acceptance that different women could have different perspectives.

Participants acknowledged that there are individual cultures at the different schools, and that it is important to differentiate between the academic content of an institution and the institution's social purpose. If the institution has an interest in becoming intellectually-

responsible and ethically-responsible, there has to be analysis of what is actually being delivered compared to what the institution claims it is doing. Examination of an institution's culture is necessary at not only women's colleges, but coeducational institutions as well.

Issues For Future Research

Examine the role of faculty at women's colleges, including the work climate and the impact of faculty expectations on student outcomes. An example is the issue of faculty expectations of female students. We need to know what the faculty expect from students at women's colleges. There was agreement among the participants that faculty at women's colleges, in the words of one participant, "take women seriously" and that these institutions have high academic expectations for all women students. There was also a desire to see more research on working conditions for women staff and faculty at women's colleges.

Identify causes of "pain" for students and faculty at women's colleges, and strategies for avoiding the pain in the future. There is a need to develop research to understand why some women identify "pain" as a part of their experience at women's colleges, and to deal with the conditions that lead to this pain. There was concern among the participants that some women come to their institutions with expectations that are not met by the institution. Women may also come to their institution with a different set of

values than what they find at the institution. When expectations and personal values conflict with the institution, these women experience this "pain." Some of this pain has been identified as being related to cultural differences. There was agreement that many women's colleges have developed programs ranging from strategies to increase faculty diversity to special alumnae weekends for minority women, and that programs such as these could serve as models for other institutions.

How Research on Women's Colleges Could Inform the Public Policy Community

Review of the commissioned papers, roundtable proceedings, and the research issues, as described in this chapter, lead to ideas for the following ways research on women's colleges can inform the public policy community:

- Consider spending more money on research on women's colleges, while enough of these colleges still exist to study. (While they are not expected to disappear altogether, the number of women's colleges does get smaller every year.) Oversample women's colleges in large national databases. Encourage small case studies of women's colleges, and other qualitative studies.

- Use research findings from studies on women's colleges to inform coeducational institutions on strategies for providing a high quality higher education experience to

all of their women students, but particularly minority and nontraditional women students.

- Include women's colleges in any strategies to increase the numbers of women in traditionally male-dominated fields such as mathematics and science.

Chapter 1

What Is This Thing Called Institutional Productivity?

M. Elizabeth Tidball

Professor Emeritus of Physiology at the George Washington University Medical Center, Distinguished Research Scholar and Co-Director, The Tidball Center for the Study of Educational Environments at Hood College

Introduction

This paper is about ways to increase our understanding of what constitutes a positive educational environment for women. We do this by determining institutional productivities of colleges and universities with respect to women and men who go on to a post-college accomplishment generally agreed to be indicative of success. The presupposition is that elements of the collegiate environment have made a contribution to the likelihood of such an accomplishment. Unlike basic research in the natural sciences, where there is a standard point of departure, institutional productivity studies have not yet evolved to the extent that results from different researchers can be compared in quantitative terms.

One goal of our research is the ongoing development of a method for assessing institutional

productivity that can serve as common currency. Not only is this effort compatible with my intellectual upbringing as a physiologist, but it also has the potential to increase the usage and appreciation of a method that provides a unique and revealing angle of vision with respect to educational environments as they influence women's subsequent accomplishments. By developing a standardized methodology, results from institutional productivity studies can augment results from other forms of research in the effort to discover those elements of educational environments that encourage or submerge the talents of women whose endowments warrant accomplishment.

Because research of this kind is primarily phenomenological, or observational, it is critical that the steps used prior to counting and drawing conclusions from the observations be both as thorough and as accurate as possible. That is to say, the final calculations are not the object of the exercise: anyone can do the arithmetic. The difficult part comes from making the decisions of what to count and how to count, what assumptions are to be made, and how the assumptions made will impact each subsequent step of the process.

Further, this kind of research is extremely time consuming, demands enormous patience, and necessitates eagle eyesight and tireless attention to detail. Because the development of the lists from which the calculations are to be made are, in fact, "the research," what is to be evaluated first is how the numbers were acquired rather than what the numbers are. Finally, the precise communication of the methodological steps is essential, not only to others' understanding of how to design and interpret their own and others' work, but also in order to compare results across

studies conducted at different times by different investigators.

What follows is a brief description of the evolution of a protocol for our current methodology for studying institutional productivity. I present this as a means of proposing a standardized point of departure for those who would employ this kind of research as a way of gaining a greater understanding of the influence of educational environments on students' subsequent accomplishment. My hope is that the protocol will also be helpful to those who need to evaluate institutional productivity studies for comparison with results gained by other methodologies.

What Is Success?

There are many ways to define success. All come with disadvantages, not least of which, from a research point of view, is their measurability. *Who's Who* directories provide much useful as well as necessary information. Their principal drawbacks are the length of time it takes for a woman to achieve sufficiently to be included, and the subjectivity of the decision for inclusion on the part of the editors. Research on medical entrants can be built from data gathered by the Association of American Medical Colleges. The information is objective and records a clearcut achievement essentially at the time of earning the baccalaureate, thereby obviating the concern that the success is "too far" removed from baccalaureate influences. As a measure for success, it is very specific and well-defined, but it is also a narrow marker applicable only to a relatively few.

Although I have used listings in a *Who's Who* directory and entrance into an American medical school as proxies for success of college graduates, I have found the most generally helpful measure to be the earning of a research doctorate. This is not because a research doctorate is the only post-college accomplishment worthy of study or even the "best;" rather, it is because the Doctorate Records File (DRF) of the National Research Council/National Academy of Sciences is one of very few markers of accomplishment that is reliable and unbiased, that has been accumulated by a not-for-profit non-governmental agency recording national participation, that can be linked with the baccalaureate origins of the doctorates, and that can supply year of baccalaureate, year of doctorate, field of doctorate, and sex of recipients. This is asking much of any data bank, but the DRF does have these data available and they do satisfy all the criteria necessary for undertaking baccalaureate origins and institutional productivity studies. In sum, databases can be appropriately constructed from DRF holdings so that their analysis contributes to an understanding of educational environmental effects on a standardized measure of post-college success.

Baccalaureate Beginnings

Before institutional productivity there were baccalaureate origins. In baccalaureate origins work one provides a simple listing of the number of college graduates by institution who subsequently became successful. Most early studies did not separate data by sex so that there was no way to know the situation for women as contrasted to that for men. Further, most studies made no attempt to have the achievement related to its baccalaureate antecedents. In doctoral studies researchers frequently use a "lag time" between the year of baccalaureate and doctorate in order to approximate the relationship. Nor is an adjustment made for the fact that the time between

baccalaureate and doctoral degrees is dependent both on sex and according to field by sex. In many studies there has been no attempt to make adjustments for institutional size; results were simply reported as the absolute number of baccalaureate recipients from each institution who subsequently became successful.

The first baccalaureate origins research that separated achievers by sex was conducted in the late 1960s and published a few years later (Tidball 1973). This study, based on samples drawn from *Who's Who of American Women*, also accounted for the different sizes of institutions, and grouped institutions not only as women's and coeducational colleges but also as highly selective and less selective ones. In all categories, women's colleges were most productive of successful women. Subsequently this work became a *Citation Classic* for the social and behavioral sciences and a model of interdisciplinary research. Oates and Williamson (1978), Rice and Hemmings (1988), and Wolf-Wendel (1998) have all confirmed women's colleges to be most productive of successful women. The first use of the DRF as the originating database for a sample of doctorates earned only by women made adjustments for institutional size and for calculating the distribution of women doctorates by institutional type and by field of doctorate (Tidball 1980). Like the *Who's Who* study, women's colleges were most productive of doctorates in all fields.

Landmark methodological advances were reported by Tidball and Kistiakowsky(1976). For the first time, baccalaureate and doctoral degrees were separated and analyzed by sex. Further, by ordering data from the DRF to be the doctorates only for baccalaureate recipients of specified years, doctorates earned were thereby attached directly to the baccalaureates from which they had

originated, obviating the use of lag times for both sex and field. Correction factors were calculated for the separation of baccalaureate and first professional degrees, necessary until 1961 when the U. S. Government began listing these degrees separately. The total number of doctorates, by field and by sex, for each of six decades for each baccalaureate institution were reported. Also calculated was the percentage of doctorates earned by sex and by field for each baccalaureate institution by dividing the total number of doctorates by the actual number of baccalaureates earned from the matched institution. This allowed for a size correction in the assessment of productivity. Results appeared as rank ordered lists of baccalaureate institutions of origin. Women's colleges were overrepresented both in terms of absolute numbers of successful graduates and in terms of their percentage productivity of achievers. Subsequent similar studies have confirmed many of these findings for women's colleges (Wolf-Wendel 1998).

Madness in the Method

The most common barriers to comparability among baccalaureate origins studies include the following: failing to disaggregate students by sex; failing to make allowance for institutional size; selecting a time period for earning the baccalaureate degree that is too brief and/or too close to the DRF survey selected as the basis of achievement; using proxies for the number of baccalaureate recipients that do not appropriately reflect the population from which the achievers emerged; disaggregating an already small number of achievers into even smaller subgroups for further analysis and generalized conclusions. In addition, there is no conventional agreement for categories of institutional types, few attempts to design studies from a common base, and generally inadequate descriptions of methodology. These omissions preclude the ability to assess

the relative reliability of the reported results, and hence to draw more than tentative conclusions.

Emphasizing Populations

Nonetheless, refinements and additions to a basic methodology have continued. Lists of baccalaureate origins according to percentage productivity have been developed and their presentation made alphabetically. Subsequently, publication of absolute numbers of baccalaureates attaining success has been abandoned. Instead, considerable attention began to be given to the determination of the population of institutions that was to constitute the study. Based on studies of baccalaureate origins of medical graduates (Manuel and Altenderfer 1961) and of doctoral natural scientists (Knapp and Goodrich 1951), numerical minima of doctorates were used to determine which baccalaureate institutions were to comprise the study population. *All* institutions that met these criteria were included and their productivities calculated. Since the study population was the universe of all institutions meeting the criteria, it was therefore not subject to the limitations of statistical theory. For the first time, in addition to listing individual institutions as the baccalaureate origins of doctoral recipients separately for each sex, sex-separated data from groups of like institutions were combined to increase the reliability of conclusions derived from institutional productivity results. Nine institutional groups were identified for both the study of entrants into American medical schools (Tidball 1985) and for natural science doctorates (Tidball 1986). In both studies, women's colleges were by far the most productive of successful women.

Productivity as an Institutional Characteristic

Most recently, a further refinement has been made in the development of the study population. Rather than identifying the institutions for inclusion according to an absolute number of research doctorates produced during a specified time period, individual institutional productivities were calculated. These were then used to determine entry into the study population such that the resultant distribution of women and men doctorates/baccalaureates replicated that of the entire nation. Calculations of institutional productivities were made for women and for men according to institutional type and admissions selectivity, and, for the coeducational institutions, according to the ratio of men to women doctoral productivities from the same institution grouped according to several ratio ranges. The ratio studies provided an additional and valuable assessment of institutional climates for women in coeducational settings that is lacking when only data for women are collected.

When results from these studies are presented graphically, patterns of participation by doctoral field are highlighted for women and for men, both nationally and for the study population of the 316 most productive baccalaureate institutions in the country with respect to research doctoral production. The study population closely mirrors the national data and shows that, for men, field participation increases almost as a straight line from a low in education through the humanities, social sciences and life sciences to a high in the physical sciences. By contrast, for women, the pattern looks like an inverted "V" with a low in education rising through the humanities to a high in the social sciences, and then falling through the life sciences to a low in the physical sciences.

There is always great interest in the relationship between institutional selectivity and productivity. For men, and to a lesser extent for women, the most selective institutions are clearly associated with greater productivity. Beyond these most selective categories, however, the degree of selectivity makes little difference in productivity. Of considerable interest to women's colleges is the finding that this group of institutions, although ranking fourth in terms of mean selectivity, is a clear first in mean productivity. That is, for women's colleges, productivity is disproportionately greater than selectivity. This is consistent with previous findings for women listed in *Who's Who* registries. Ratios of productivity for men to productivity for women from the same institutions were calculated and plotted by doctoral field against productivity. Ratios were grouped into several ranges from those less than one (female productivity greater than male productivity) to ratios greater than three. As the ratios increased from less than one to as great as eight, institutional productivities for men were barely altered. However, under the same circumstances, increasing ratios were associated with markedly declining productivities for women. We interpret these findings to signify that gender equity has not yet arrived at the large majority of the most productive coeducational institutions in the country. We also note that for institutions in which the ratio is less than one, productivities for women are comparable to those of women's colleges (Tidball and et al. 1999).

Conclusion

A person might well wonder what is the relevance of studying baccalaureate origins and institu-

tional productivity. One response relates to the fact that these methodologies provide for the only outcomes research that is both objective and quantitative. Such characteristics are especially useful because they contribute uniquely determined information to a large and overarching area of research that seeks to define what aspects of institutional environments are especially beneficial for women. As is patently obvious, there is no single way to determine these qualities. Rather it is important that there be a number of approaches, from quantitative interrogation of self-reports to qualitative social science studies, to case studies and to anecdotal evidence, in addition to the research presented here. Each provides its own kind of information about positive outcomes for collegiate women that points to attributes regularly found in women's colleges. Another response relates to a constellation of consistent findings from such studies that contributes to our larger knowledge base. Here there are at least four recurring themes: 1) simply being a college for women is of prime importance to women's subsequent success; 2) the productivity of women's colleges is disproportionately greater than their selectivity might suggest; 3) the negative effect of men students on women's accomplishments is absent from women's colleges, thereby not diminishing their productivity; and 4) women's colleges provide an abundance of adult women role models who are closely related to these colleges' productivity of successful women. As is the case in any field of endeavor, the recurrence of themes--regardless of the setting, or the type of investigation, or the individuals doing the research, or the institution in which the work was accomplished--provide the kind of evidential material that bespeaks truth.

Baccalaureate origins and institutional productivity research present a creative approach in which

rigorous development of study populations along with insightful and critical analyses are applied to longstanding and continuing questions of what constitutes optimal environments for the education of women. They do not and cannot stand alone, any more than can other methodologies. Rather they become partners in the search for what works for women. Further, they represent a very real interdisciplinary effort by bringing methodologies associated with the natural sciences to contribute new dimensions and directions to ongoing questions in the social psychology of higher education for women.

References

Knapp, R. H., and H. B. Goodrich. 1951. "The Origins of American Scientists." *Science* 113: 543-45.

Manuel, W. A., and M. E. Altenderfer. 1961. PHS Publication 845. *Baccalaureate Origins of 1950-59 Medical Graduates.* Washington: U. S. Government Printing Office.

Oates, M. J., and S. Williamson. 1978. "Women's Colleges and Women Achievers." *Signs: Journal of Women in Culture and Society* 3: 795-806.

Rice, J. K., and A. Hemmings. 1988. "Women's Colleges and Women Achievers: An Update." *Signs: Journal of Women in Culture and Society* 13: 546-59.

Tidball, M. E. 1973. "Perspective on Academic Women and Affirmative Action." *Educational Record* 54: 130-35.

Tidball, M. E. 1980. "Women's Colleges and Women Achievers Revisited." *Signs*: *Journal of Women in Culture and Society* 5: 504-17.

Tidball, M. E. 1985. "Baccalaureate Origins of Entrants into American Medical Schools." *Journal of Higher Education* 56: 385-402.

Tidball, M. E. 1986. "Baccalaureate Origins of Recent Natural Science Doctorates." *Journal of Higher Education* 57: 606-20.

Tidball, M. E., and V. Kistiakowsky. 1976. "Baccalaureate Origins of American Scientists and Scholars." *Science* 193: 646-52.

Tidball, M. E., D. G. Smith, C.S. Tidball, and L. E. Wolf-Wendel. 1999. *Taking Women Seriously: Lessons and Legacies for Educating the Majority.* Phoenix: Onyx Press.

Wolf-Wendel, L. E. 1998. "Models of Excellence: The Baccalaureate Origins of Successful European American Women, African American Women, and Latinas." *Journal of Higher Education* 69:141-86.

Chapter 2

Who Attends a Women's College Today and Why She Should: An Exploration of Women's College Students and Alumnae

Emily A. Langdon

St. Norbert College

Introduction

Historically, women's colleges have provided women access to an American higher education system that had mostly excluded them from serious study. At one point in American history there were over 300 women's colleges, today there are approximately 80.[1] In recent decades, the majority of these women's colleges succumbed to coeducation or closure, due to increasing costs and decreasing student populations. [2] Once coeducation became widely accepted in higher education, some argued that single-sex institutions were anachronistic and unnatural. Yet those

women's colleges which have survived the setbacks of the 1960s and 1970s have recently enjoyed surging enrollments and a renewal of their missions in the 1980s and 1990s.

In recent decades, there has been a steady interest in women's colleges among empirical researchers in the education community. Single-sex institutions and their graduates have been the topic of much research from which few solid conclusions have been drawn. Beginning with the ground-breaking studies of women's college alumnae achievement by M. Elizabeth Tidball in the 1970s,[3] researchers have tried to identify what about these institutions makes them so special. Some researchers have raised concerns about the notion that women's colleges actually produce differential outcomes.

One way findings on women's colleges have been challenged has been through questioning the methodology behind Tidball's research.[4] In the early 1970s, Tidball published her initial and now classic study[5] which involved identifying the baccalaureate origins of women who appeared in *Who's Who in America*. Her main findings showed that women's college alumnae were more likely to be women "achievers," meaning women who had achieved professional success in order to be recognized by *Who's Who*, and that there was a positive relationship between women achievers and the percentage of women on the faculty. Tidball concluded that women's colleges produced more women achievers than coeducational institutions, although her initial emphasis was the proportion of women role models, not the women's college environment.

Tidball's work is widely cited yet the results have been repeatedly challenged. The research has

been critiqued for its interpretation of a correlation between women achievers and women faculty members as a cause and effect relationship.[6] Others suggest that the findings were not valid since the selective "Seven Sisters" were compared to coeducational institutions of lower selectivity[7] or that institutional selectivity, as well as students' background characteristics, were not controlled.[8]

To address the issue of selectivity in Tidball's work, Oates and Williamson[9] recreated the "women achievers" research using *Who's Who in America* but created three comparison groups. The Seven Sisters were treated as a separate group so that the remaining women's colleges were compared to a sample of women from small, coeducational institutions. Oates and Williamson reported that the selective institutions supported Tidball's claims of higher production of women achievers, but the less selective women's colleges were not found to produce women achievers in any greater numbers than their lesser selective coeducational peers. These findings suggested that "achiever" status could be derived more from a student's high socioeconomic background than from attendance at a women's college.

Rice & Hemming[10] reexamined Tidball's 1973 research by trying to reproduce her results with a more current sample of *Who's Who in America* lists. Their findings substantiate Tidball's study for the 1940s and 1950s but do not hold for the 1960s and 1970s. The demographics of women's colleges changed dramatically in the decades of the 1960s and 70s, which may explain the findings. However, none of the researchers controlled for students' background characteristics.[11]

Despite the initial criticism and mixed results, more recent researchers have continued to explore the educational outcomes of women's colleges. After controlling for a variety of background characteristics, including socioeconomic status and institutional selectivity, Astin[12] found that women's colleges had positive effects on overall academic development, cultural awareness, writing skills, critical thinking ability, and foreign language skills. In his longitudinal study of the impact of college on students, Astin[13] found that women's colleges had positive effects on baccalaureate completion as well as many satisfaction measures. Women college alumnae were more satisfied with the faculty, with academic requirements, with individual support services, and with the overall quality of instruction than women who had attended coeducational institutions.

Smith[14] also studied a cohort of students who entered college in 1982, reporting that 65 percent of women's college students earned baccalaureate degrees, compared to 50 percent of their women peers at coeducational institutions. Her further findings suggested that women's college alumnae were more satisfied with their college experiences, with the notable exception of social life.

Research comparing the educational outcomes of women's colleges to coeducational colleges found that the women's college cohort reported higher self-esteem and held more positive perspectives on the issue of equity in sex roles;[15] had more positive relationships with faculty members and more positive interaction with peers, which encouraged academic work;[16] and came from higher socioeconomic backgrounds.[17] When the students' perspectives of their

institutions were examined[18], it was reported that women's college respondents were more likely to perceive that their college was student-oriented, was committed to multicultural issues and encouraged civic involvement. Thus, differences between women's college graduates and graduates of coeducational institutions have been well documented[19] but the persistence of those differences after the college years has been questioned.[20]

The history of this research provides the rationale for a study that explores why women choose to attend women's colleges today, with a focus on the socioeconomic backgrounds of women who choose to attend women's colleges. Additionally, there has been a need to compare the satisfaction of women's college alumnae to their female peers at similar but coeducational colleges in an attempt to identify whether initial differences in educational outcomes persist beyond graduation.

Research Questions and Data Sets

Specifically, this study will attempt to answer the following research questions:

- Do women who attend women's colleges differ from women who attend private, coeducational colleges in socioeconomic status? This will be explored by using the educational background of students' parents, students' family income, and the occupations of students' parents.

- Do women who attend women's colleges and women who attend private, coeducational colleges differ in their reasons for attending college and reasons for selecting their undergraduate institutions?

- How satisfied are women's college alumnae with their educational experience? Are women's college alumnae more or less satisfied with their educational experience compared to women who attended private, coeducational colleges?

This study used two separate sets of data collected by the Cooperative Institutional Research Program (CIRP) at the Higher Education Research Institute at the University of California at Los Angeles. The first two research questions were addressed with one of these sets of data, a national data set of women students who entered college in 1997. Each fall, the Student Information Form (SIF) is used to survey thousands of college freshmen. The instrument contains a variety of questions including students' background characteristics, academic plans, activities in high school, reasons for attending college, and opinions about current issues and life goals. These descriptive data were used to compare women who entered women's colleges in 1997 to those who entered private, coeducational colleges. This data set includes 4,997 respondents representing 28 women's colleges[21]. The comparison sample includes 29,450 respondents from private, four-year, coeducational colleges.

For the final research question addressing the persistence of alumnae satisfaction, a second longitudinal data set was used studying a cohort of women's college alumnae and their peers at

coeducational institutions. This second sample included first time, first-year students who completed an initial survey upon entrance into college in 1985, completed a senior year follow-up survey in 1989 and five years after the senior year survey, completed a follow-up questionnaire in 1994. In the sample, the 508 women's college respondents were directly matched with the coeducational college respondents. For every alumna of a women's college in the data set, an alumna from a private, four-year, coeducational college of similar selectivity and geographic region was selected for a total of 508 women within each institutional type.

Satisfaction ratings on a variety of educational experiences were reported in 1989. Then five years later, the alumnae reported their satisfaction with their undergraduate education, albeit in a more general fashion. The respondents were asked about their willingness to re-enroll in their undergraduate institution, which served as a proxy for a satisfaction measure.

Frequencies and descriptive statistics provided a profile of the current students who selected single-sex undergraduate institutions. The longitudinal data set also provided frequencies to examine the persistence in satisfaction with college. T-tests were calculated to determine whether the differences in the two groups were statistically significant.

Socioeconomic Status of Women at Women's Colleges

Analysis of this CIRP data reveals a stark contrast to the conventional wisdom that women's college graduates are successful because of their socioeconomic backgrounds.[22] Socioeconomic

status is traditionally measured by a combination of the income and education level of one or both parents. As presented in table 2-1, more women's college respondents reported their annual family income in the lowest bracket whereas more coeducational college respondents reported their family income in the middle and upper brackets. These differences were slight but statistically significant, suggesting that women's college students today come from lower income families.

The educational achievement of the respondents' parents is consistent with the family income findings. More women's college respondents than coeducational college respondents reported that their mothers did not complete high school. This pattern holds for the education levels of the fathers. More women's college respondents reported that their fathers did not complete high school.

Table 2-1--Socioeconomic Status Indicators

	Women's College (percentages)	Coed College (percentages)	Difference
Parental Income			
Below $20,000	11.0	8.4	2.6*
$20,000 to 39,999	18.8	17.6	1.2
$40,000 to 59,999	19.3	21.2	1.9*
$60,000 to 99,999	24.9	26.2	1.3
$100,000 and above	25.9	26.6	0.7
Mother's Education			
No High School Degree	5.5	4.4	1.1*
High School Degree	40.1	42.6	2.5*
College Degree	33.0	33.1	0.1
Graduate Degree	21.4	20.0	1.4
Father's Education			
No High School Degree	6.7	5.6	1.1*
High School Degree	33.7	34.9	1.2
College Degree	29.2	30.1	0.9
Graduate Degree	30.4	29.5	0.9

Note: *$*p<.01$*.
Source: Cooperative Institutional Research Program (CIRP), Higher Education Research Institute, UCLA.

Although more women's college respondents also reported that their parents were more likely to obtain graduate degrees, those results were not statistically significant.

Frequently, the career of one or both parent is used in determining socioeconomic status. Table 2-2 presents the data on parents' careers for both women's college and coeducational college respondents. More women's college respondents reported mothers involved in business careers, whereas more coeducational college respondents reported mothers who were elementary school teachers or full-time homemakers. This pattern is interesting. The mothers of coeducational college respondents were more likely to have careers in the traditional area of elementary education or to be homemakers, whereas the mother's of women's college respondents were

more likely to have careers in the business arena. Perhaps having mothers with a less traditional career-orientation was influential in these women choosing to attend a women's college in 1997.

More coeducational college respondents reported fathers in business careers. This might be related to the higher parental income reported by the coeducational college respondents. Other than the difference in the business careers, the two groups reported similar career experiences for their fathers.

Table 2-2--Parents' careers

	Women's College (percentages)	Coed College (percentages)	Difference
Mother's Career			
Business	15.1	13.5	1.6*
Clerical	6.5	7.0	0.5
Education (secondary)	5.6	5.6	0.0
Education (elementary)	8.7	11.4	2.7*
Homemaker (full-time)	12.5	13.5	1.0
Nurse	8.2	8.1	0.1
Unemployed	4.9	4.0	0.9
Father's Career			
Business	28.9	31.2	2.3*
Doctor	5.1	4.6	0.5
Education (secondary)	3.2	3.7	0.5
Engineer	6.7	7.1	0.4
Lawyer	4.0	4.0	0.0
Skilled worker	7.4	6.5	0.9
Unemployed	2.7	2.3	0.4

Note: *$p<.01$.
Source: Cooperative Institutional Research Program (CIRP), Higher Education Research Institute, UCLA.

Overall, there were slight differences in the socioeconomic status indicators of these college students. The parents of the women's college respondents were less likely to finish high school

and their family incomes were more likely to fall in the lowest bracket. These indicators combine to suggest that students entering women's colleges in 1997 came from families of lower socioeconomic status. The one difference in the fathers' careers substantiate this assertion. However, the mothers' careers produced an interesting pattern, suggesting that mothers of women's college students held less traditional careers whereas the mothers of coeducational college respondents held more traditional careers.

The majority of the differences between the socioeconomic indicators were not statistically significant, nor were they different in a practical sense. This perhaps suggests that these students' backgrounds were more alike than different. Since socioeconomic status is frequently used to explain reasons for attending college as well as selecting colleges, it is important to examine what other reasons may exist for choosing to attend a women's college.

Why Do Women Attend Women's Colleges?

Entering freshmen were asked on the SIF to rate how important the following reasons were in their decision to attend college, choosing from "very important" to "somewhat important" or "not important." The reasons given as "very important" for attending college are reported in table 2-3. Again, many of the responses between the two groups were similar however, the differences are worth exploring. Women who selected women's colleges reported that becoming cultured and proving to others that they could succeed were important reasons for attending college. Also, women's college respondents were more likely than their coeducational college peers to report

parental, mentor, or role model influence and encouragement as very important in their reasons for attending college.

Table 2-3--Very important reasons for attending college

	Women's College (percentages)	Coed College (percentages)	Difference
To learn more about things	84.0	82.6	1.4
To gain a general education	73.8	73.8	0.0
To get a better job	68.5	67.7	0.8
To make more money	58.5	57.7	0.8
To become a cultured person	55.3	50.7	4.6*
To improve reading and study skills	46.8	45.6	1.2
Parents wanted me to go	36.4	33.7	2.7*
To prove to others I could succeed	34.5	31.0	3.5*
Wanted to get away from home	20.0	18.8	1.2
Role model/mentor encouraged me	16.7	13.6	3.1*

Note: *$p<.01$.
Source: Cooperative Institutional Research Program (CIRP), Higher Education Research Institute, UCLA.

The SIF also asked entering freshmen to rate how important the following reasons were in selecting their particular undergraduate institution. The reasons given as "very important" are reported in table 2-4. Current women's college students reported that they

Table 2-4--Very important reasons for selecting undergraduate institution

	Women's College (percentages)	Coed College (percentages)	Difference
Good academic reputation	76.9	72.8	4.1*
Graduates get good jobs	68.9	62.1	6.8*
Size of college	61.3	60.6	0.7
Graduates go to top graduate schools	52.2	44.6	7.6*
Good social reputation	23.1	28.9	5.8*
Wanted to live near home	19.2	16.6	2.6*
Rankings in national magazines	10.8	14.0	3.2*
Relatives wanted me to come	9.9	7.3	2.6*
Religious affiliation of institution	9.2	13.6	4.4*
College representative recruited me	6.7	5.0	1.7*
Teacher advised me	5.1	3.7	1.4*
Athletic department recruited me	3.2	7.1	3.9*

Note: *$p<.01$.
Source: Cooperative Institutional Research Program (CIRP), Higher Education Research Institute, UCLA.

were more likely to select their undergraduate institution based on a perception that alumnae received good jobs and attended top graduate schools. Additionally, women's college respondents were more likely than coeducational college respondents to cite their college's academic reputation as very important in their decision to attend that institution. Current coeducational college respondents were more likely than women's college respondents to offer social reputation and religious affiliation of the institution as very important reasons in their college choice process. Women who selected coeducational colleges also reported being recruited by an athletic department in greater numbers than their peers at women's colleges.

These data offered a picture of current college students who are attending private colleges and suggested some of the differences between the women who attend single-sex colleges and those

who attend coeducational colleges. The two groups of women were more alike than different in many of the socioeconomic status indicators, yet their reasons for attending college and for selecting their respective undergraduate institutions differed significantly.

Student Satisfaction at Women's Colleges

The second data set provides longitudinal information about the satisfaction levels women's college alumnae report, both upon graduation and again five years later. These women, who entered college in 1985, rated their satisfaction in 1989 with many aspects of their college experience. The women's college alumnae's responses are compared to the coeducational college alumnae's responses in table 2-5. Experiences were rated on a scale from "very satisfied," to "somewhat satisfied," and "not satisfied." The women's college respondents reported statistically significantly higher in every area with the exception of social life, which is consistent with other research on women's college satisfaction.[23]

Table 2-5--College experiences with which respondents were very satisfied in 1989 (in percentages)

	Women's College (N=508)	Coed College (N=508)	Difference
Opportunity to talk with professors	69.9	51.4	18.5***
Courses in major field	60.0	46.9	13.7**
Overall quality of instruction	55.5	29.5	26.0***
Contact with faculty/administration	53.9	29.9	24.0***
Relations with faculty/administration	52.6	29.1	23.5***
Overall college experience	51.4	39.0	12.4**
Student Housing	36.6	13.0	23.6***
Library Facilities	33.1	16.7	16.4***
Academic advising	28.7	15.6	13.1***
Computer facilities	28.7	17.9	10.8***
Academic tutoring/assistance	24.0	11.8	12.2***
Lab facilities and equipment	20.9	11.4	9.5***
Campus social life	14.8	20.5	5.7**

Note: **p<.05, **p<.01, ***p<.001.*
Source: Cooperative Institutional Research Program (CIRP), Higher Education Research Institute, UCLA.

The largest discrepancies will be addressed. Higher percentages of women's college alumnae reported being very satisfied with: the overall quality of instruction, student contact with faculty and administration, relations between faculty and administration, and opportunities to talk with faculty. The pattern reflected women's college alumnae as more satisfied with faculty members' competency and availability. Other patterns suggest women's college respondents were also more satisfied with campus facilities (student housing, library, computer facilities and labs) as well as academically-oriented variables: courses in major field, academic advising, and academic assistance.

The longitudinal data set includes survey information collected five years after graduation. In 1994, the respondents were asked: if you had it to do all over again, would you re-enroll in your same undergraduate institution? This item was used as a proxy for a satisfaction measure. The results of this question are reported in table 2-6. Of the coeducational college alumnae, only 39 percent responded that they could definitely re-enroll, as compared to 52 percent of the women's college alumnae. This large discrepancy was statistically significant at the most stringent level ($p<.001$).

This suggests that the higher satisfaction results reported in 1989 persist after the excitement of graduation is over. Five years later, women who attended women's colleges

Table 2-6--Re-enrolling in undergraduate institution in 1994 (in percentages)

	Women's College (N=506)	Coed College (N=499)	Difference
Definitely	52.2	38.7	13.5***
Probably	36.7	29.4	7.3
Don't know	2.0	1.4	0.6
Probably Not	10.5	15.6	-5.1
Definitely Not	6.5	7.0	-0.5

Note: **p<.05, **p<.01, ***p<.001.*
Source: Cooperative Institutional Research Program (CIRP), Higher Education Research Institute, UCLA.

but are now employed in a coeducational work force or attending coeducational graduate schools reported that they supported their decision to attend a women's college and would in fact do it again. This sheds doubt on the criticism that women's colleges do not prepare women to function in the "real coeducational world."

Conclusion

This study compared women's college respondents to coeducational college respondents to provide a profile of the current students who selected single-sex undergraduate institutions. Regarding the socioeconomic status indicators, the women who entered women's colleges in 1997 tended to come from families with lower incomes. However, the women's college respondents were more likely to have mothers in business careers, whereas the coeducational college respondents were more likely to have mothers with more traditional careers, such as elementary school teacher and homemaker.

Additionally, the women's colleges respondents differed from the coeducational college respondents both in their reasons for attending college in general and their reasons for selecting their particular undergraduate college. Women's college respondents were more likely to report that becoming cultured and proving to others that they could succeed were important reasons for attending college. Also, they were more likely than their coeducational college peers to report that parents, mentors, or role models were influential in their college choice.

The longitudinal data set also provided frequencies to examine the persistence in satisfaction with college. At the time of their graduation, the women's college alumnae were more likely to report satisfaction with their educational experiences, except social life. Additionally, when asked five years after graduation whether they would re-enroll in their same undergraduate

college, the women's college alumnae were more likely to respond in the affirmative. This suggests that the satisfaction measured directly after the college experience persisted more so for the women's college alumnae than for the coeducational college alumnae.

References

Astin, A. W. 1977. *Four Critical Years.* San Francisco: Jossey-Bass.

Astin. A. W. 1993. *What Matters in College? Four Critical Years Revisited.* San Francisco: Jossey-Bass.

Gose, B. 1995. "Second Thoughts at Women's Colleges," *The Chronicle of Higher Education.*

Kim, M. 1995. "Organizational Effectiveness of Women-only Colleges: The Impact of College Environment on Intellectual and Ethical Development." Unpublished doctoral dissertation. University of California, Los Angeles, CA.

Kim, M. and Alvarez, R. November/December 1995. "Women-only Colleges: Some Unanticipated Consequences." *Journal of Higher Education.* 66 (6).

Lentz, L. P. 1980. "The College Choice of Career-salient Women: Coeducational or Women's?" *Journal of Educational Equity and Leadership*. 1(1), pp. 23-25.

Miller-Bernal, L. 1989. "College Experiences and Sex-Role Attitudes: Does a Women's College Make A Difference?" *Youth and Society*. 20 (4), pp. 363-387.

Oates, M. J. and Williamson, S. 1978. "Women's Colleges and Women Achievers." *Signs: Journal of Women in Culture and Society*. 3(4), pp. 795-806.

Rice, J. K. and Hemmings, A. 1988. "Women's Colleges and Women Achievers: An Update." *Signs: Journal of Women in Culture and Society*. 13(3).

Riordan, C. July/August 1994. "The Value of Attending a Women's College: Education, Occupation and Income Benefits." *Journal of Higher Education*. 65, pp. 486-510.

Riordan, C. Spring 1992. "Single-and Mixed-gender Colleges for Women: Educational, Attitudinal, and Occupational Outcomes." *Review of Higher Education*. 15, pp. 327-346.

Sharp, M. K. 1979. "Women's Colleges: Equity and Optimum." *College Board Review*. (3), pp. 111-118.

Slater, R. B. 1995. "Women's Quest to Scale the Ivory Tower." *Monthly Forum on Women in Higher Education*. 1(1), pp. 13-20.

Smith, D. G. March/April 1990. "Women's Colleges and Coed Colleges: Is There a Difference for Women?" *Journal of Higher Education*. 61, pp. 181-197.

Smith, D., Wolf, L. E.; and Morrison, D. E. May/June 1995. "Paths to Success: Factors Related to the Impact of Women's Colleges." *Journal of Higher Education*. 66 (3) pp. 245-266.

Stoecker, J. and Pascarella, E. T. July/August 1991. "Women's Colleges and Women's Career Attainments Revisited." *Journal of Higher Education*. 62(4), pp. 394-405.

Tidball, M. E. Spring 1973. "Perspectives on Academic Women and Affirmative Action." *Educational Record*. 54, pp. 130-135.

Tidball, M. E. May 1974. "The Search for Talented Women." *Change*. 6, pp. 51-52, 64.

Tidball, M. E. May 1975. "Women on Campus - and You." *Liberal Education*. 61, pp. 285-292.

Tidball, M. E. 1980. "Women's Colleges and Women Achievers Revisited." *Signs: Journal of Women in Culture and Society*. 5(3), pp. 504-517.

Tidball, M. E. and Kistiakowsky, V. 1976. "Baccalaureate Origins of American Scientists and Scholars." *Science*. 193, pp. 646-652.

Notes

1. R. B. Slater, "Women's Quest to Scale the Ivory Tower," Monthly Forum on Women in Higher Education 1 (January 1995).

2. Marcia K. Sharp, "Women's Colleges: Equity and Optimum," *College Board Review* (3), 1979.

3. M. Elizabeth Tidball, "Perspectives on Academic Women and Affirmative Action," *Educational Record*, 54(2) 1973.

4. Mary J. Oates and Susan Williamson, "Women's Colleges and Women Achievers," *Signs: Journal of Women in Culture and Society*, 3 (4) 1978.

5. Tidball, 1973.

6. Linda P. Lentz, "The College Choice of Career-salient Women: Coeducational or Women's?" *Journal of Educational Equity and Leadership*, 1(1) 1980.

7. B. Gose, "Second Thoughts at Women's Colleges," *The Chronicle of Higher Education*, 1995.

8. Oates and Williamson, 1978.

9. Ibid., 1978.

10. Joyce K. Rice and Alice Hemmings, "Women's Colleges and Women Achievers: An Update." *Signs: Journal of Women in Culture and Society*, 13(3) 1988.

11. Mikyong Kim and Rodolfo Alvarez, "Women-only Colleges: Some Unanticipated Consequences." *Journal of Higher Education*, 66, Nov/Dec 1995.

12. Alexander W. Astin, *What Matters in College? Four Critical Years Revisited.* (San Francisco: Jossey-Bass, 1993).

13. Ibid., 1993.

14. Daryl G. Smith, "Women's Colleges and Coed Colleges: Is There a Difference for Women?" *Journal of Higher Education*, 61, March/April 1990.

15. Cornelius Riordan, "Single- and Mixed-gender Colleges for Women: Educational, Attitudinal, and Occupational Outcomes." *Review of Higher Education*, 15(3) 1992.

16. Leslie Miller-Bernal, "College Experiences and Sex-role Attitudes: Does a Women's College Make a Difference?" *Youth and Society*, 20, 1989.

17. Daryl G. Smith, Lisa E. Wolf and Diane E. Morrison, "Paths to Success: Factors Related to the Impact of Women's Colleges. *Journal of Higher Education*, 66, May/June 1995.

18. Ibid.

19. Astin, 1993; Smith, 1990; Smith, Wolf & Morrison, 1995; Riordan, 1992.

20. Judith L. Stoecker and Ernest T. Pascarella, "Women's Colleges and Women's Career Attainment Revisited." *Journal of Higher Education*, 62, July/August 1991.

21. Women's Colleges included in Sample (by State): Mills College, CA; Scripps College, CA; St. Joseph College, CT; Brenau College, GA; Wesleyan College, GA; St. Mary's College, IN; Hood College, MD; College of Our Lady of the Elms College, MA; Pine Manor College, MA; Regis College, MA; Wellesley College, MA; College of St. Catherine, MN; College of St. Elizabeth, NJ; Barnard College, NY; Russell Sage College, NY; Wells College, NY; Meredith College, NC; Notre Dame College, OH; Bryn Mawr College, PA; Cedar Crest College, PA; Immaculata College, PA; Marywood College, PA; Carlow College, PA; Rosemont College, PA; Wilson College, PA; Hollins College, VA; Randolph-Macon Woman's College, VA; Sweet Briar College, VA.

22. There are some limitations to this study. These questions were asked at vulnerable times in students' lives: the beginning of their college career and the conclusion of their college career/beginning of their post-college life. This may bring up questions as to the validity of the measures, however, self-reports are usually considered reliable (Astin, 1993.) The 1997 CIRP data set created some challenges. Although the sample sizes were large, they were also disproportionate. There were almost six times more women attending coeducational college in the 1997 data. In the longitudinal sample, the women's college respondents were directly matched with the coeducational college respondents. For every women's college alumna, an alumna from a coeducational college of similar selectivity and geographic region was selected. This was not the case for the 1997 data set where the women's college respondents were compared to peers at non-sectarian and Catholic coeducational colleges. These institutional types were selected since most of the women's colleges in the sample fit into these two categories. However, even the limited sample of coeducational college women was much larger than the women's college sample. Percentages were reported to facilitate comparisons between the difference samples and the statistical analysis of the differences accounted for sample size as a determinant of significance.

23. Alexander W. Astin, *Four Critical Years.* (San Francisco: Jossey-Bass, 1977).

Chapter 3

Research Issues on Women's Colleges

Lisa E. Wolf-Wendel

University of Kansas

Introduction

According to a significant body of literature, women's colleges have demonstrated a positive impact on their women students. Compared to women at coeducational institutions, for example, students at women's colleges are more satisfied with their overall college experience (Astin 1992; Astin 1977; Smith 1990); are more likely to major in non-traditional fields (Bressler and Wendell 1980; Scheye and Gilroy 1994; Sebrechts 1993; Solnick 1995); and express higher levels of self esteem and leadership skills (Astin 1992; Astin 1977; Kim and Alvarez 1995; Riordan 1992; Smith 1990; Smith, Wolf, and Morrison 1995; Whitt 1994; Whitt 1992). In addition, students at women's colleges are more likely to graduate, to have high expectations of themselves, to attend graduate school and to be "successful" in their adult lives (Astin 1992; Astin 1977; Conaty 1989; Ledman et. al 1995; Riordan 1992; Smith 1990; Smith, Wolf and Morrison 1995). Further,

studies that examine the baccalaureate origins of women who have achieved some measurable degree of post-baccalaureate success overwhelmingly find that women's colleges graduate disproportionate numbers of successful women (Fuller 1986a, 1986b, 1989a, 1989b; Oates and Williamson 1978; Rice and Hemmings 1988; Sharpe and Fuller 1995; Tidball 1973, 1974, 1980, 1985, 1986, 1989; Tidball and Kistiakowsky 1976). However, there is currently little evidence on the impact of women's colleges on women of color.

What types of institutions demonstrate an ability to produce successful black women graduates? Similar to research on women's colleges, there is a significant body of literature on historically black colleges that demonstrates their ability to facilitate the success of black students (Allen, Epps, and Haniff 1991; Fleming 1984; Green 1989; National Association of Independent Colleges and Universities 1991; Pascarella and Terenzini 1991). As with the research on women's colleges, studies conclude that historically black colleges have granted undergraduate degrees to disproportionate numbers of blacks who subsequently earned advanced degrees (Brazziel 1983; Fuller 1989b; Payne 1987/1988; Pearson and Pearson 1985; Thompson 1986; Thurgood and Weinman 1991). Unfortunately, these studies on historically black colleges fail to disaggregate data by gender--so the impact on women's colleges for black women is unclear.

In contrast to the large number of studies about women's colleges and historically black institutions, there is almost no evidence on which types of institutions facilitate the success of Hispanic women. Recently, however, Solarzano (1995) published an analysis of the baccalaureate origins of doctorates earned by Hispanics and concluded that Hispanic-serving

colleges[1] appear to be the major producers of Hispanic social science doctorates. The impact of women's colleges on Hispanic women is obscured by studies that fail to disaggregate by race *and* gender.

A New Look at Baccalaureate Origins of Successful Women

A recent study conducted by this author attempted to determine the baccalaureate origins of black, white, and Hispanic women who earned doctorates and who were listed in a recent edition of one three reference books--*Who's Who in America, Who's Who Among Black Americans*, and *Who's Who Among Hispanic Americans*. The methodology used in this study replicates other baccalaureate origins studies (see Wolf-Wendel 1998).

Results of this study confirm the impact of women's colleges, historically black colleges, and Hispanic-serving colleges in graduating disproportionate numbers of successful women (see Table3-1). Specifically, predominantly white women's colleges graduated a disproportionate number of white women who achieved post-baccalaureate success as compared to comparably selective coeducational institutions. For black women, the results indicate that historically black women's colleges produce the highest proportion of successful graduates, followed by historically black coeducational institutions, followed by predominantly white women's colleges, followed by predominantly white coeducational institutions. This same pattern emerges for

successful Hispanic women. That is, Hispanic-serving former women's colleges (there are no longer any Hispanic-serving women's colleges) disproportionally produce the successful Hispanics, followed by a tie between coeducational Hispanic-serving colleges and predominantly white women's colleges; predominantly white coeducational institutions graduate the smallest proportion of successful Hispanics.

Examination of the data in the table reveals little overlap among successful institutions for the different groups of women. For the most part, institutions successful with one group of women are not as successful with other groups. This finding is important given that previous research has concluded that predominantly white women's colleges are the most productive institutions for women who have either earned doctorates, been admitted to medical school, or been listed in a *Who's Who* book (e.g. Tidball, 1985, 1986, 1989.) Despite the apparent differences between the most productive institutions for each group of women, there is an important similarity. If one examines the lists of most successful institutions for each group, one cannot help noticing that selective, predominantly white, coeducational institutions do not appear. Given that the institutions most credited by the public for "success" are the research universities and the prestigious Ivy League institutions, their absence is notable.

Along with comparing the productivity of various institutional types for the three groups of women, the Wolf-Wendel study also examined which institutional factors were predictive of successful institutions. The results of these analyses for the white women indicate that institutional gender was the best predictor; institutional selectivity, mean enrollment, and

institutional control were also significant predictors of the baccalaureate origins of white women. In other words, single-sex, more selective, smaller, private institutions graduated the largest proportions of successful white women. Interestingly, the results of similar analyses conducted for both black women and Hispanics indicated that institutional race and institutional gender, in that order, were consistently the most predictive indicators of success. As with the analyses based on white women, other significant predictors included institutional size and institutional control. In contrast to the results found for white women, however, institutional selectivity was not a significant predictor of institutional success for black women. Further, for the Hispanics, selectivity was a significant negative predictor of institutional success. In other words, for the Hispanics, the more selective the institution, the less likely it was to graduate a large proportion of successful Hispanic alumnae. These findings for ethnic/racial minority women are striking given that institutional selectivity is often equated with institutional success.

Institutional Characteristics Associated with Success

To gain a deeper understanding of the institutional characteristics associated with the success of women's colleges it is helpful to visit some campuses. Through such visits, a researcher can build case studies that allow for in-depth exploration and holistic descriptions that represent people and institutions in their own terms (Lincoln and Guba 1985; Yin 1989). This section of the paper presents a summary derived from qualitative case studies of two women's college campuses--Bryn Mawr College and Bennett College. They were selected as case study sites because they both have a demonstrated record of facilitating the success of their women students

and by understanding how members of these campuses see their institution, it becomes easier to see how these places can be institutional models. Although the characteristics of these institutions are not necessarily "typical" of women's colleges, they represent some of the variation among women's colleges.

Bryn Mawr College is a prestigious and resource-rich women's college located in an affluent suburb of Philadelphia, Pennsylvania. It has a national reputation for attracting bright women who go on to achieve great things. Specifically, Bryn Mawr graduates one of the highest proportions of white women who earned doctorates and who were listed in *Who's Who In America*. In contrast, Bennett College, located in Greensboro, North Carolina, is one of two historically black women's colleges. Though relatively resource poor and "non-selective" in its admissions criteria, Bennett also graduates high achieving women. In particular, Bennett College was among the most productive institutions in graduating black women who subsequently earned doctorates and who were listed in *Who's Who Among Black Americans* (Wolf-Wendel 1998).

Four-day site visits were conducted at each of these colleges during the spring of 1994. The visits included approximately 30 hour-long interviews with students, faculty members, alumnae, and administrators. In addition, at each campus the researcher attended campus events, visited residence halls, and interacted informally with a range of campus members. During the formal interviews, participants were asked to describe why they thought their institution was so successful with women students. The formal interviews were tape recorded, transcribed and coded to discover themes. Lessons resulting from the case studies are presented below.

Seven Lessons

There are many lessons that one can learn from visiting such different campuses as Bryn Mawr and Bennett. They were founded for different reasons and serve different populations, yet each of these institutions takes every female student seriously and works to foster her success. A brief examination of the main traits responsible for creating an environment that facilitates the success of students illuminates important differences and similarities between the cases. This analysis also provides an opportunity to make connections between the two cases and the wider literature regarding campus climate.

Lesson 1: Clarify and communicate the mission. The relationship between a strong, focused mission and educational quality has been discussed often in the literature (*cf.* Astin 1985; Kuh, Schuh, Whitt, et. al. 1991). One of the key elements common to both Bryn Mawr and Bennett is the existence of a strong, focused mission. Campus constituents at both schools know the mission and believe in the mission. Members of the Bennett community reiterated the importance of being a college dedicated to serving the needs of African-American women. At Bryn Mawr, there was an emphasis on the importance of the college's focus on educating high-achieving women. The effect of serving a narrowly focused student body was likened to the notion of Virginia Woolf's "room of one's own." Institutional traditions at both colleges symbolically reinforce the idea that students at these colleges are going to be successful. However, it is important to remember that the singular focus on meeting the needs of a particular

group of students puts both campuses in an advantageous position compared to many other postsecondary institutions, which have to respond to the needs of a wider range of students.

Lesson 2: Believe students can achieve and hold them to these expectations. High academic expectations are known to be one of the key institutional traits associated with facilitating student success. In *Involving Colleges*, for example, Kuh, Schuh, and Whitt qualitatively examined how campuses foster student learning and development outside the classroom. They found the presence of faculty members who "assume that all students can learn anything, given the proper circumstances"(284) to be a trait common to successful institutions. Faculty and administrators at Bryn Mawr and Bennett have high expectations of their students, though they enact the trait differently.

Bennett, with its non-selective admissions policies, follows a "value added model" of education that is geared to "bring students from where they are when they enter, to where they should be when they exit." One means of achieving this goal was by repeatedly telling students that they could succeed, that they were capable, and that they could do, or be, anything they wanted to if they just kept trying. At Bryn Mawr, particularly in traditionally male fields, many of the faculty members described a form of high expectations that was quite similar to that found at Bennett. Specifically, Bryn Mawr faculty talked about not giving up on students who were having academic difficulties and reiterated the notion that women are capable of achieving in male dominated fields. However, in other academic areas at Bryn Mawr, high admission standards become inextricably linked to high expectations. Many at Bryn Mawr emphasized the idea that

student success is related to how good students are when they enter the institution. Respondents believed that the better the student is when she enters, the more one can expect of her while enrolled, and the more successful she will eventually become. Those interviewed at Bryn Mawr talked about how they treated their students like scholars and colleagues, engaging them in research and other active learning experiences. Institutions that have high expectations of their female students while taking into account students' pre-collegiate experiences are models of ways to take women seriously.

Lesson 3: Make students feel like they matter. Some degree of personal support on a campus is pivotal for student success. Schlossberg's (1989) theory of mattering puts the importance of support into perspective. Mattering, which is measured by student perceptions, occurs when students feel that they are noticed, that what they say or do is important, and that they are appreciated. Though the levels of support differ between Bryn Mawr and Bennett, it is clear that students at both campuses feel that they matter. At both schools the norm is for faculty to take a personal interest in student success--"to get involved in their lives." One-on-one interaction between faculty and students characterized both institutions; faculty promotions and pay raises were connected to faculty working with students. The *Involving Colleges* (1991) study also talks about the importance of mattering, although they use the term "ethic of care" to describe support given to students. Students at "Involving Colleges" perceive "that faculty care and are interested, responsible and available" (286).

Lesson 4: Provide strong, positive role models to demonstrate unlimited possibilities. Given Tidball's (1973) research demonstrating a connection between women achievers and the ratio of women faculty to women students, it is not surprising that members of both campuses emphasized the importance of role models in explaining their success with students. Both campuses provide environments in which members of underrepresented groups are central and present in diverse roles throughout the institution. Students, alumnae, campus visitors, administrators, support staff and faculty members all were identified as important role models for students. Members of both campuses explained that role models were important because they conveyed to women students the idea that "I can do that too" and created a "visual correlation between image and possibility." In places where "the portraits on the wall are women" success seems inevitable.

Lesson 5: Have enough women on campus to form a critical mass. Respondents at both campuses also mentioned the importance of having a critical mass of students who are similar to one another. Tidball (1983) wrote about the concept of critical mass, explaining it as being "enough to produce a response that is self-generating" (6). She further explained that in higher education the term connotes the "necessity for enough women on a campus to make their presence felt." The benefits of having a critical mass of similar students, according to respondents across the sites, include the following: students don=t feel marginalized and in the minority; they feel comfortable and safe; they feel like they have voice; they feel like part of the campus community; and, they feel freer to express differences within the group. While having students of similar backgrounds was said to be important, more specifically, respondents

mentioned the critical importance of being surrounded by driven, motivated, talented students. A faculty member at Bryn Mawr, for example, talked about the importance of having a place where intellectual women "find camaraderie and colleagueship of other women who are trying to do the same thing." Similarly, a professor at Bennett stated, "Here, you have a group of students who look like you, who come from similar backgrounds, and who all have the same high achievement goals."

Lesson 6: Provide ample opportunities for students to hold leadership positions. Of all of the factors listed, the area of increased involvement opportunities at women's colleges has been given the most attention in the wider literature. Research by Whitt (1994) and the *Involving Colleges* study both emphasize how women's colleges provide involvement opportunities for their students. Involvement, as defined by Astin (1977), entails the investment of psychological and physical energy in tasks, people, and activities. Astin's theory of involvement suggests that students learn by being involved. Whitt's case studies of students at three women's colleges identified the ways that women's colleges provide extensive opportunities for women to assume leadership positions. Whitt's research findings echo the situation found at both Bryn Mawr and Bennett. Students at both campuses had a large variety of opportunities to be involved. These opportunities, according to respondents, help students develop strong leadership skills, keep them active in their institutions, and generally facilitate their overall success. At both Bryn Mawr and Bennett, respondents suggested that because they were at a women's college, women were not only expected, but obligated, to hold all of the available leadership positions. As one respondent stated, "If it needs to be done, it's a given that women will do it."

Lesson 7: Include women in the curriculum and educate them about social realities.

Though not widely studied, a review of the literature on the impact of diversity initiatives indicates some positive outcomes associated with addressing issues of race, gender, and social class in the curriculum (Appel, Cartwright, Smith, and Wolf 1996). As such, it was not surprising to find that members of both the Bryn Mawr and Bennett campuses mentioned the importance of learning about gender and racial issues in both the formal and informal curriculum. However, respondents at both campuses also emphasized the importance of providing students with a "traditional" curriculum. A faculty member at Bennett College explained that their curriculum is fairly mainstream because "we need to prepare them to know the same material as other students so they can do well on the standardized tests." Nonetheless, members of both campuses emphasized the importance of exposing students to their own history, literature and backgrounds. Women are infused into the curriculum at both institutions, providing students with role models and knowledge about where they come from. This inclusion in the curriculum was also credited with helping students become aware of racism, sexism, and classism faced by those in the "real world." Faculty at both institutions explicitly tried to "equip students with knowledge" to combat social problems such as the glass ceiling, while providing a temporary haven for women to gird themselves to face external realities.

Areas in Need of Further Inquiry

There are a large number of questions that remain unanswered about the types of institutions that have positive effects on women students and more specifically about the characteristics associated with these successful colleges. In particular, there is a need for more case studies that examine, from a qualitative perspective, how different types of women's colleges facilitate the success of their students. For example, compared to Bryn Mawr and Bennett, how alike, or different, are Catholic women's colleges, southern women's colleges, urban women's colleges, etc.? How do institutions with varying resources, both monetary and in terms of student characteristics, create environments that help their students succeed? These questions are important because the research conducted on the impact of women's colleges does not show that only those with resources are successful--there are many women's colleges that graduate successful women without the benefit of ample resources (Wolf-Wendel, Baker, Murphew 1998.)

Given the changes in the market demand for women's colleges, it would be fruitful to explore how the remaining women's colleges have survived without changing their mission to admit men or without "going under." How have women's colleges managed to stay competitive? How are they marketing their institutions and who is attending? In particular, it would be interesting to explore those campuses that are purposefully attracting non-traditional aged students to see the ways in which these campuses are facilitating their success.

Conclusion

The characteristics inherent at both Bryn Mawr and Bennett parallel findings from other sources on the traits connected to successful institutions. High expectations, support, presence of role models, critical mass of high achieving students, opportunities for extracurricular involvement, inclusion of women in the curriculum, and a recognition of the social realities facing women in the "real world," are all traits associated with institutions that facilitate the success of their women students. Bryn Mawr and Bennett carry out these traits in different ways, exemplifying the idea that women's colleges--though they take women seriously--are not all alike. Differences in race, ethnicity, social class, and other experiences influence what students need from their campuses and how campuses should respond.

While separate examinations of the characteristics of each institution are illuminating, it is important to understand that the whole of these institutions is greater than the sum of their parts, and one cannot look at a single element in isolation. Instead, it is the combination of characteristics, the aura of these institutions, which makes them unique and able to facilitate the success of their students. Bryn Mawr and Bennett are only two examples of the many ways that women's colleges take women seriously. Other colleges, in other contexts, have other means by which to facilitate the success of their women students. Nonetheless, institutions like Bryn Mawr and Bennett offer concrete lessons for other colleges to follow.

Table 3-1BTop 10 institutions for doctoral achievement for women and women graduates in *Who's Who*, by race/ethnicity

White

	Institution	State	Gender1	Control	Race	Carnegie	Prestige	Mean Size	Total PhD	Ratio
1	Bryn Mawr	PA	Wc	Priv	pw	la1	6	944	381	404
2	Wellesley	MA	Wc	Priv	pw	la1	6	1945	615	316
3	Barnard	NY	Wc	Priv	pw	la1	5	2100	652	311
4	Mt. Holyoke	MA	Wc	Priv	pw	la1	5	1896	522	275
5	Smith	MA	Wc	Priv	pw	la1	5	2518	662	263
6	Swathmore	PA	Coed	Priv	pw	la1	6	1224	294	240
7	Sarah Lawrence	NY	Wch 68	priv	pw	la1	4	817	159	195
8	Vassar	NY	Wch 69	priv	pw	la1	5	2112	411	195
9	Radcliffe	MA	Wch 72	priv	pw	la1	6	1942	376	194
10	Goucher	MD	Wc	priv	pw	la1	3	912	170	186

Black

	Institution	State	Gender	Control	Race	Carnegie	Prestige	Mean Size	Total PhD	Ratio
1	Spelman	GA	wc	priv	hbcu	la2	3	1199	109	91
2	Fisk	TN	coed	priv	hbcu	la2	3	1089	85	78
3	Bennett	NC	wc	priv	hbcu	la2	2	578	38	66
4	Tougaloo	MS	coed	priv	hbcu	la2	3	748	34	45
5	Talladega	AL	coed	priv	hbcu	la2	2	552	23	42
6	Hampton	VA	coed	priv	hbcu	comp1	3	2742	96	35
7	Tuskegee	AL	coed	priv	hbcu	comp1	2	2803	93	33
8	Howard	DC	coed	priv	hbcu	res1	3	6915	208	30
9	Lincoln	PA	coed	pub	hbcu	la2	2	1016	24	24
10	Morgan State	MD	coed	pub	hbcu	comp1	2	3919	86	22

Hispanic

	Institution	State	Gender	Control	Race	Carnegie	Prestige	Mean Size	Total PhD	Ratio
1	Our Lady of the Lake	TX	Wch 69	priv	hacu	comp2	2	1016	22	22
2	Incarnate Word	TX	Wch 70	priv	hacu	la2	3	1034	14	14
3	Barry	FL	Wch 75	priv	hacu	comp1	3	1383	13	9
4	Barnard	NY	wc	priv	pw	la1	5	2098	18	9
5	U. of Miami	FL	coed	priv	hacu	res1	4	9272	60	6
6	Bryn Mawr	PA	wc	priv	pw	la1	6	944	5	5
7	Texas Woman's U.	TX	wc	pub	pw	dg1	2	4130	21	5
8	Texas A & I	TX	coed	pub	hacu	comp1	2	4922	25	5
9	Pan American	TX	coed	pub	hacu	comp1	1	6196	30	5
10	Pomona	CA	coed	priv	pw	la1	6	1333	6	4

White

	Institution	State	Gender	Control	Race	Carnegie	Prestige	Mean Size	Who's Who	Ratio
1	Wellesley	MA	wc	Priv	pw	la1	6	1945	35	18
2	Sarah Lawrence	NY	Wch 68	Priv	pw	la1	4	817	12	15
3	Vassar	NY	Wch 69	Priv	pw	la1	5	2112	30	14
4	Bryn Mawr	PA	wc	Priv	pw	la1	6	944	13	14
5	Radcliffe	MA	Wch 72	Priv	pw	la1	6	1942	24	12
6	Barnard	NY	wc	Priv	pw	la1	5	2100	24	11
7	Smith	MA	wc	Priv	pw	la1	5	2518	26	10
8	Manhattanville	NY	Wch 71	Priv	pw	la1	4	979	9	9
9	Connecticut College	CT	Wch 69	priv	pw	la1	5	1654	15	9
10	Bennington	VT	Wch 78	priv	pw	la1	3	585	5	9

Black

	Institution	State	Gender	Control	Race	Carnegie	Prestige	Mean Size	Who's Who	Ratio
1	Fisk	TN	coed	priv	hbcu	la2	3	1089	44	40
2	Bennett	NC	wc	priv	hbcu	la2	2	578	20	35
3	Spelman	GA	wc	priv	hbcu	la2	3	1199	30	25
4	Howard	DC	coed	priv	hbcu	res1	3	6915	131	19
5	Tougaloo	MS	coed	priv	hbcu	la2	3	748	11	15
6	Knoxville	TN	coed	priv	hbcu	la2	3	778	11	14
7	Lincoln	PA	coed	pub	hbcu	la2	2	1016	13	13
8	Stillman	AL	coed	priv	hbcu	la2	3	644	8	12
9	Mills	CA	wc	priv	pw	la1	4	794	9	11
9	Mills	CA	wc	priv	pw	la1	4	794	9	11
10	Talladega	AL	coed	priv	hbcu	la2	3	552	6	11

Hispanic

	Institution	State	Gender	Control	Race	Carnegie	Prestige	Mean Size	Who's Who	Ratio
1	Our Lady of the Lake	TX	Wch 69	priv	hacu	comp2	2	1016	10	10
2	Incarnate Word	TX	Wch 70	priv	hacu	la2	3	1034	7	7
3	New Mexico Highlands	NM	coed	pub	hacu	comp2	2	1749	9	5
4	Trinity U.	TX	coed	priv	pw	comp1	4	2362	11	5
5	Barry	FL	Wch 75	priv	hacu	comp1	3	1383	6	4
6	Barnard	NY	wc	priv	pw	la1	5	2098	8	4
7	Texas Women's U.	TX	wc	pub	pw	dg1	2	4130	12	3
8	Texas A & I	TX	coed	pub	hacu	comp1	2	4922	13	3
9	U. of Miami	FL	coed	priv	hacu	res1	4	9272	23	2
10	Pomona	CA	coed	priv	pw	la1	6	1333	3	2

Note: Data in this table represent the top 10 institution that granted undergraduate degrees to women since 1965 who subsequently earned doctorates between 1975 and 1991 or who were listed in the 1992-93 editions of one of three Who's Who reference books. Gender: This designation determined from the Women's College Coalition. wc=women's college, Wch=women's college changed to coed, coed=coeducational institution. Control and Carnegie**:** These data come from the Classification of Higher Education (1987). Priv=private, pub=public, la 1=Liberal Arts 1, la 2=Liberal Arts 2, comp1= Comprehensive 1, comp2 =Comprehensive 2, res1=Research 1, dg1=Doctoral Granting 1. Race: The designation comes from a list of Historically Black Colleges and Universities in Black Issues in Higher Education (1992) and information from the membership list of The Hispanic Association of Colleges and Universities. pw=predominently white institution, hbcu=historically black college or university, hacu=member of Hispanic Association of Colleges and Universities. Prestige: This is a measure determined by Barron's Profiles of American Colleges (1996) using a 6-point selectivity index ranging from "most

selective" (6) to "non-competitive" (1). Mean Size: Data come from a survey conducted by the Federal Office of Civil Rights under the authority of The Civil Rights Act of 1964. The survey, conducted every other year since 1966, asks every postsecondary institution to indicate their full-time equivalent enrollment. These figures represent the mean undergraduate enrollments from 1966 to 1988. Total PhD: Data on doctorates earned comes from The Doctorate Records File (DRF) gathered by the National Research Council of the National Academy of Sciences. These figures include all women (by race/ethnicity) who earned an undergraduate degree since 1965 and who earned a doctorate between 1975 and 1991. Who's Who: Data on Who's Who comes from the 1992-1993 editions of three reference books *Who's Who in America* (Marquis, 1992) *Who's Who Among Black Americans* (Brelin, 1992) and *Who's Who Among Hispanic Americans* (Unterburger, 1993). The column contains all women listed in these reference books (by race/ethnicity) who earned an undergraduate degree since 1965. Ratio: Computed by the author, these numbers represent the number of doctorates (or *Who's Who* entrants) divided by the mean enrollment per institution. This figure is then multiplied by 1,000.

Sources: American Council on Education, *Guide to Colleges and Universities*. Washington D.C.: Author, 1994; Barron's Profiles of American Colleges, New York: Barron's Inc., 1986.; Black Issues in Higher Education, *Directory of HBCUs and Other Predominantly Black Colleges and Universities*. Black Issues in Higher Education, 1992, 9:3, 68-69.; Brelin, C. (Ed.). Who's Who Among Black Americans, 7th Edition. Detroit: Gale Research Inc., 1992; Carnegie Foundation for the Advancement of Teaching. *Carnegie Classification of Higher Education Institutions.* Princeton: Author, 1987; College Entrance Examination Board, *The College Handbook, 1993-94*, 31st Edition. New York: Author, 1994; Hispanic Association of Colleges and Universities. *Annual Report, 1993*. San Antonio: Author, 1993; Marquis, *Who's Who in America, 1992-1993*, 2nd Edition. Detroit: Gale Research Inc., 1992.

References

Allen, W. R., E. G. Epps, and N. Z. Haniff. 1991. *College in Black and White: African American Students in Predominantly White and in Historically Black Public Universities*. Albany: State University of New York Press.

Appel, M. D. Cartwright, D. G. Smith, and L. E. Wolf-Wendel. 1996. *The Impact of Diversity on Students: A Preliminary Review of the Research Literature.* Washington: American Association of Colleges and Universities.

Astin, A. W. 1977. *Four Critical Years.* San Francisco: Jossey-Bass Publishers.

Astin, A. W. 1985. *Achieving Educational Excellence.* San Francisco: Jossey-Bass Publishers.

Astin, A. W. 1992. *What Matters in College? Four Critical Years Revisited.* San Francisco: Jossey-Bass Publishers.

Brazziel, W. F. 1983. "Baccalaureate College of Origin of Black Doctorate Recipients." *The Journal of Negro Education.* 52(2), pp. 102-109.

Bressler, M., and P. Wendel. 1980. "The Sex Composition of Selective Colleges and Gender Differences in Career Aspirations." *Journal of Higher Education* 51(6), pp. 650-663.

Conaty, J. C. 1989. "College Quality and Future Earnings: Where Should You Send Your Sons and Daughters to College?" Paper presented at the 84th annual meeting of the American Sociological Association, San Francisco, CA.

Fleming, J. 1984. *Blacks in College: A Comparative Study of Students' Success in Black and White Institutions*. San Francisco: Jossey-Bass Publishers.

Fuller, C. H. 1986a. *An Analysis of Leading Undergraduate Sources of Ph.D.'s, Adjusted For Institutional Size.* Ann Arbor: Great Lakes Colleges Association.

Fuller, C. H. 1986b. "Ph.D. Recipients: Where Did They Go to College?" *Change* 18(6), pp. 42-51.

Fuller, C. H. 1989a. *Undergraduate Origins of Women and Men 1970-1982 Graduates Who Received Doctorates Between 1970-1986.* Ann Arbor: Great Lakes Colleges Association.

Fuller, C. H. 1989b. *Baccalaureate Sources of 1975-1986 Doctorates Earned by American Indian, Asian, Black, Hispanic and White Men and Women Who Received Baccalaureate Degrees Between 1975-1982: Total Numbers Adjusted for Institutional Size.* Ann Arbor: Great Lakes Colleges Association.

Green, M. F. 1989. *Minorities on Campus: A Handbook for Enhancing Diversity*. Washington: American Council on Education.

Kim, M., and R. Alvarez. 1995. "Women-only Colleges: Some Unanticipated Consequences." *The Journal of Higher Education*: 66(6), pp. 641-668.

Kuh, G. D., J. H. Schuh, E. J. Whitt, and Associates. 1991. *Involving Colleges: Successful Approaches to Fostering Student Learning and Development Outside the Classroom.* San Francisco: Jossey Bass Publishers.

Ledman R. E., et. al 1995. "Successful Women and Women's Colleges: Is There an Intervening Variable?" *Sex Roles: Journal of Research* 33(7), pp. 489-97.

Lincoln, Y. S., and E. G. Guba. 1985. *Naturalistic Inquiry*. Beverly Hills: Sage Publications.

National Association of Independent Colleges and Universities. 1991. *Minorities on Campus. Independent Minority Colleges and Universities: National Models of Educational Pluralism*. Washington: Author.

Oates, M. J., and S. Williamson. 1978. "Women's Colleges and Women Achievers." *Signs: Journal of Women in Culture and Society* 3, pp. 795-806.

Pascarella, E. T., and P. T. Terenzini. 1991. *How College Affects Students*. San Francisco: Jossey-Bass Publishers.

Payne, N. J. 1987/1988. "The Role of Black Colleges in an Expanding Economy." *Educational Record* Fall/Winter, pp. 104-107.

Pearson, W., and L. C. Pearson. 1985. "Baccalaureate Origins of Black American Scientists: A Cohort Analysis." *Journal of Negro Education* 54(1), pp. 24-34.

Rice, J. K., and A. Hemmings. 1988. "Women's Colleges and Women Achievers: An Update." *Signs: Journal of Women in Culture and Society*. 13(3), pp. 546-559.

Riordan, C. 1992. "Single-and Mixed Gender Colleges for Women: Educational, Attitudinal, and Occupational Outcomes." *The Review of Higher Education.* 15(3), pp.327-346.

Riordan, C. 1994. "The Value of Attending a Women's College: Education, Occupation and Income Benefits." *Journal of Higher Education.* 65(4), pp. 486-510.

Scheye, P. A., and F. D. Gilroy. 1994. "Women's Career Efficacy and Educational Environments." *Career Development Quarterly.* 42, pp. 244-251.

Schlossberg, N. K. 1989. "Marginality and Mattering: Key Issues in Building Community." In *Designing Campus Activities to Foster a Sense of Community*. *New Directions for Student Services*, 48, ed. D. C. Roberts. San Francisco: Jossey-Bass Publishers.

Sebrechts, J. S. 1993. "Cultivating Scientists at Women's Colleges." *Initiatives* 55(2), pp. 45-52.

Sharpe, N. R., and C. H. Fuller. 1995. Baccalaureate Origins of Women Physical Science and Engineering Doctorates: Relationship to Institutional Gender and Science Discipline. *Journal of Women and Minorities in Science and Engineering* 2, pp. 1-15.

Smith, D. G. 1990. "Women's Colleges and Coed Colleges: Is There a Difference for Women?" *Journal of Higher Education.* 61(2), pp. 181-197.

Smith, D. G., L. E. Wolf, and D. Morrison. 1995. "Paths to Success: Factors Related to the Impact of Women's Colleges." *Journal of Higher Education.* 66(3), pp. 245-266.

Solnick, S. J. 1995. "Changes in Women's Majors from Entrance to Graduation at Women=s and Coeducational Colleges." *Industrial and Labor Relations Review.* 48(3), pp. 505-514.

Solorzano, D. G. 1995. "The Baccalaureate Origins of Chicana and Chicano Doctorates in the Social Sciences." *Hispanic Journal of Behavioral Sciences.* 17(1), pp. 3-32.

Thompson, D. C. 1986. *The Black Elite: A Profile of Graduates of UNCF Colleges.* New York: Greenwood Press.

Thurgood, D. H., and J. M. Weinman. 1991. *Summary Report 1990: Doctorate Recipients From United States Universities*. Washington: National Academy Press.

Tidball, M. E. 1973. "Perspective on Academic Women and Affirmative Action." *Educational Record 5*4(1), pp. 130-135.

Tidball, M. E. 1974. "The Search for Talented Women." *Change,* 6(4), pp. 51-52, 64.

Tidball, M. E. 1976. "Of Men and Research: The Dominant Themes in American Higher Education Include Neither Teaching nor Women." *Journal of Higher Education* 47(4), pp. 373-389.

Tidball, M. E. 1980. "Women's Colleges and Women Achievers Revisited." *Signs: Journal of Women in Culture and Society.* 5(3), pp. 504-517.

Tidball, M. E. 1983. "The Ideal Gas, a Critical Mass, and Homeostasis." *Women's Studies Quarterly* 11, pp. 2, 5-7.

Tidball, M. E. 1985. "Baccalaureate Origins of Entrants into American Medical Schools." *Journal of Higher Education.* 56(4), pp. 385-402.

Tidball, M. E. 1986. "Baccalaureate Origins of Recent Natural Science Doctorates." *Journal of Higher Education.* 57(6), pp. 606-620.

Tidball, M. E. 1989. "Women's Colleges: Exceptional Conditions, Not Exceptional Talent, Produce High Achievers." In *Educating the Majority: Women Challenge Tradition in Higher Education*, ed. C. Pearson, D. Shavlik, and J. Touchton. New York: American Council on Education/ Macmillan Series on Education.

Tidball, M. E., and V. Kistiakowsky. 1976. "Baccalaureate Origins of American Scientists and Scholars." *Science.* 193, pp. 646-652.

Whitt, E. J. 1992. "Taking Women Seriously: Lessons for Coeducational Institutions from Women's Colleges." Paper presented at the annual meeting of the Association for the Study of Higher Education. Minneapolis, MN.

Whitt, E. J. 1994. "I Can Be Anything! Student Leadership in Three Women=s Colleges." *Journal of College Student Development.* 35, pp. 198-207.

Wolf-Wendel, L. E. 1988. "Models of Excellence: The Baccalaureate Origins of Successful African-American, European-American and Hispanic Women." *The Journal of Higher Education.* 69(2), pp. 144-172.

Wolf-Wendel, L.E., Baker, B.D., and C. Murphew. 1998. "Dollars and Sense: Resources and the Baccalaureate Origins of Women Doctorates." Paper presented at the Annual Meeting of the Association for the Study of Higher Education, Miami, FL.

Yin, R. K. 1989. *Case Study Research: Design and Methods*. Newbury Park, CA: Sage.

Notes

1. Hispanic-serving colleges are defined through their membership in the Hispanic Association of Colleges and Universities (HACU), an association representing post-secondary institutions in the United States in which Latino students represent at least 35 percent of the total student enrollment. In 1990, there were 28 baccalaureate-granting Hispanic-serving institutions located in the United States. These institutions enrolled 9 percent of the Latino students attending 4-year colleges and universities in the continental United States (Hispanic Association of Colleges and Universities, 1993).

Chapter 4

Diversity and Women's Colleges

Beverly Guy-Sheftall

Spelman College

Introduction

Most studies of women's colleges have been historical in focus, which include the histories of particular institutions, especially the "Seven Sisters", historically Black colleges for women, and Catholic colleges.[1] These studies include Thomas Woody's classic, multi-volume *A History of Women's Education in the United States* (1929); Mabel Newcomer's *A Century of Higher Education for American Women* (1959); Elaine Kendall's *Peculiar Institutions* (1975); and Helen Lefkowitz Horowitz's *Alma Mater: Design and Experience in the Women's Colleges from Their Nineteenth Century Beginnings to the 1930s* (1984). A second category of inquiry, which involves more recent history, focuses on the unique environments of women's colleges and the particular impact of these critically important special mission institutions on the development of

women students, especially in comparison with co-ed colleges and universities. Issues under consideration, especially in journal articles and special reports,[2] have included whether there are greater leadership opportunities for female students at women's colleges; whether graduates of women's colleges are more likely to enter traditionally male-dominated fields, especially given their undergraduate training; and whether the larger number of female role models at women's colleges (administrators, faculty, and staff) has a more positive impact on the development of women students.

A third area of study has included both generic and thematic essays on women's colleges in the proliferation of books on higher education for women such as Mariam Chamberlain's *Women in Academe*: *Progress and Prospects* (1988); C.A. Farnham's *The Education of the Southern Belle: Higher Education and Student Socialization in the Antebellum South* (1994); *Educating the Majority: Women Challenge Tradition in Higher Education* (1989); and Barbara Solomon=s *In the Company of Educated Women: A History of Women and Higher Education in America* (1985).

Diversity issues at women's colleges is an area that has not been undertaken by educational researchers, especially if diversity is broadly defined and moves beyond an examination of access, that is the numbers of new student populations at women's colleges over the past two decades. *Women's Colleges in the United States* (1997) is an extremely important examination in this regard, and demonstrates that since 1976 women's colleges have been notable in their ability to attract women in three underrepresented categories--part-timers, older undergraduate

students, and racial/ethnic minorities. It is important to underscore at this juncture what these new commitments to diversity with respect to increasing the numbers of non-traditional female students has yielded at women's colleges which have themselves experienced a 35 percent increased from 1976 to 1993.[3] The most striking increases have been in adults (25-64 year olds account for the largest increase), part-timers (87 percent increase since 1976, making them 37 percent of total enrollment), males (nearly 10,000 in 1993), and racial/ethnic minorities.

While it is fair to say that women's colleges (except for Spelman and Bennett) remain largely white, a sharper focus (using 1993 data from Harwarth, et. al.) on the increasing enrollment of minority women at women's colleges reveals a greater commitment to attracting women of color over the past decade and a half. We should begin with an examination of the actual enrollment figures by race from 1993: 84,048 (white); 13,268 (black); 4,441 (Hispanic), 4,032 (Asian), 385 (American Indian), and 2,873 (nonresident alien).[4] The total enrollment of minority women, excluding the latter category, is 22,126, with the largest increase being Black women (nearly a 74 percent increase).

Diversity at Women's Colleges

Black women students are the largest number of minority students at all women's colleges, but it is important to point out that Asian students are the largest minority (ranging from 95 to 634) at several women's colleges (Barnard [587], Bryn Mawr, Smith, Wellesley [634], Mills, Scripps and Wells). Similarly Hispanic students are in the largest minority (over 100) at two women=s

colleges (College of Saint Elizabeth and Mount Saint Mary's College) and are in somewhat respectable numbers, relative to other women of color, at the College of New Rochelle (684), Texas Woman's University, Mills, Alverno, Leslie, Marymount, Marymount Manhattan, Wellesley and Smith. American Indian women continue to be seriously underrepresented, though at Trinity (VT), they outnumber (8) other minorities, since there were only 3 Hispanic and Asian students and 2 Black students in 1993; they are also fairly well represented, relatively speaking, at Stephens College (10).

While these data are important with regard to ascertaining student diversity at women's colleges, what is missing are data which would enable us to assess the much more difficult challenge of faculty/administrator diversity, which according to a recent AAC&U report by Daryl White, *Achieving Faculty Diversity: Debunking the Myths*, is "one of the least successful components of the campus diversity agenda."[5] Studies on coeducational institutions have indicated that majority institutions which have had the most success in the recruitment of minority faculty have provided special funds for the appointment and retention of faculty of color, have established pre-doctoral (as is the case at Smith College) and post-doctoral positions to provide new scholars of color with opportunities for completing the dissertation or conducting research before appointments to tenure-track positions. Perhaps most importantly has been the presence of top-level administrators (presidents and provosts especially) who expressed their commitment to faculty diversity by sustained action to diversify faculty in a number of ways.

Not surprisingly, in 1997 there are only two women's colleges (other than Spelman and Bennett)

with black female college presidents (Texas Woman's University and Smith College) and none with Hispanic, Asian, or American Indian women. Neglected research issues with respect to diversity at women's colleges include the following:

- What is the impact of administrators of color on a broad range of diversity issues at women's colleges?
- What is the statistical profile of women and men of color at women's colleges and what has been their impact on the development of minority women students in particular?
- What strategies have been successful for the recruitment of faculty of color at women's colleges? Are these strategies different from those that have been successful at other majority institutions?
- What barriers remain for the recruitment *and* retention of faculty of color at women's colleges? What special challenges do faculty of color face at women's colleges which are similar to and different from those which faculty of color face at other institutions? What are the most effective strategies for developing faculty capacities with respect to multicultural issues at women's colleges?[6] What is the role of faculty of color in this process?

Strategies at Women's Colleges

Though women's colleges emerged as a result of practices in mainstream higher educational institutions which prohibited the education of women or inadequately addressed their needs,

women's colleges have had similar difficulties addressing issues of difference as has been the case at other majority institutions. In other words, it is incorrect to assume that women's colleges, despite their special missions with respect to addressing gender inequalities, have historically and automatically been committed to a range of diversity issues which are apparent in the racial make-up of the general college population, the diversity of their students, programmatic imperatives and curricular innovations with respect to multiculturalism. It is also the case that women's colleges are not monolithic; have different histories with respect to dealing with diversity issues; and remain heterogeneous in their commitments to bringing about a more diverse learning environment for students. What is also apparent over the past two decades is that more women's colleges are actively engaged in a number of strategies to realize their diversity agendas.

To illustrate, over a decade ago Smith College (founded in 1875) embarked upon a major and unusual initiative for transforming their campus around diversity issues. In response to racism in the larger society and a desire to prepare their students for a multi cultural, multi-racial world, the "Smith Design for Institutional Diversity" was endorsed by the Board of Trustees under the leadership of President Mary Maples Dunn in 1988. It called for the entire Smith community to create a more inclusive and culturally diverse campus and to struggle against racism. Smith developed a clear and well-articulated institutional plan to combat racism by implementing a civil rights policy and adopting an aggressive affirmative action policy that would result in an increase of minorities on campus. An important priority was increasing the numbers of minority students by putting in place an affirmative action policy and appointing an affirmative action

officer and Affirmative Action Advisory Committee who would consult with the president. The seriousness of their commitment to diversity was also reflected in their goal, by 2004, of having a faculty that would be at least 20 percent minority; and a 20 percent minority staff in those positions for which they will have conducted national searches. In order to increase diversity presence on campus, they would continue to support the Mendenhall Fellows Program (founded in 1986) for minority doctoral candidates at the dissertation stage (at least two appointments per year, but hopefully three). Funds were also set aside for the following: faculty development in the area of establishing inclusive curriculum; the appointment of a director for the Mwangi Cultural Center who would provide needed institutional support for minority students; the establishment of a pilot faculty sponsorship program to devise strategies for creating a more supportive environment for minority faculty; and a range of other activities.

Smith College is cited as an example not because it has been successful[7], but because it provides a useful model for other women's colleges who are serious about addressing diversity issues on their campuses rather than just giving lip service to diversity (which is unfortunately the case throughout the academy). Because the Smith plan was thoughtful, conceptually sound, broad based, had clearly stated goals, appropriate strategies for achieving them, and reasonable resource allocation to support stated goals (with timetables and the identification of personnel responsible for implementing goals), it had tremendous potential for success. A related program, the Ada Comstock Scholars, provides funds for the matriculation of adult students on the Smith campus and makes it possible for older women to pursue an education at an elite women's college which would have been virtually impossible otherwise.

Mills College (founded in 1852 in California), like other women's colleges, has initiated programs more recently on their campuses which address very specifically issues relating to a range of diversity concerns. Mills' Women's Leadership Institute (WLI) was established in 1993 under President Janet Holmgren, to promote programs and activities across a wide spectrum of careers, professions and life circumstances locally, nationally and globally.[8] The WLI held a national Summit on Advancing Women's Leadership in Science in 1994; hosted an international conference for women who are college presidents in 1996; hosted a Summit on Women in Legal Education in fall, 1997; and will host in April 1998 its first student leadership conference on "Women's Leadership for Social Justice and Social Change." The first Visiting Scholars program was initiated in the 1997-98 year and will enable Mills to increase the presence of minority and international scholars on campus. Six visiting scholars, including a Native American artist/scholar from Purdue University, and a Bangladeshi lawyer and international human rights law expert from the University of Notre Dame Law School, are in residence this academic year.

In August 1995, President Janet Holmgren reaffirmed the college's commitment to affirmative action in the recruitment of minority students and faculty, despite recent events in California which sought to dismantle affirmative action. She also reminded the community that the advancement of women in education had been greatly aided by government mandates for affirmative action. President Holmgren gave a progress report on Mills' diversity efforts over the previous four years which included the creation of a campus-wide Diversity Committee and

development of a Multicultural Advancement Plan and the adoption of a Diversity Action Plan. Affirmative action guidelines for faculty searches and staff hiring were also adopted. In order to increase minority students on campus, several strategies were employed, including revising admission applications and hiring more persons of color in the Admissions Office. Holmgren also provided demographic data on faculty, students, and staff with respect to diversity. For example, as of 1994-95, students of color represented 30 percent of the undergraduate population; staff of color represented 32.6 percent. As is frequently the case, data on faculty of color were less promising though she provided a positive reading of the situation; though faculty of color were only 12.5 percent of full-time faculty in 1994-95, 7 of the 11 hired for tenure track positions during 1992-95 were people of color and two of the four new tenure-track faculty hired in 1995 were persons of color. In 1997, Mills appointed a Multicultural Program Director, who will also assume major responsibility for the College's James Irvine Foundation grant to support a Multicultural Curricular Enhancement Program for faculty development.

Mills College had previously been embroiled for several years in a divisive racial matter which attracted national attention among diversity advocates. In 1991, when President Holmgren assumed the presidency, an African American woman faculty member challenged the College's decision not to consider her for promotion to tenure, claiming race discrimination, retaliation and harassment. After several years of litigation, the College and the faculty member reached a settlement agreement in October 1997. In the press release issued on October 22, 1997, which finally brings closure to this difficult saga, Mills reaffirmed its commitment to building a more multicultural community on campus and in Oakland; statistics were provided on the increases in

faculty of color from 3 to 14 out of approximately 75 tenure track positions since 1991. Greater efforts were also made among faculty to create a more multi cultural curriculum.

A number of research questions emerge from the Mills case which include:

- How do women's colleges address faculty diversity questions, especially during high-profile cases? What strategies can be employed to prevent such difficulties? What can other colleges, including women's colleges, learn from the Mills case with respect to tenure cases involving faculty of color?
- In the aftermath of the ending of a "crisis," what can colleges do to restore confidence among their on and off-campus communities with respect to their commitments to diversity? What is the short-term and long-term impact of litigation cases with respect to diversity on women's college campuses, especially among students?

Diversity Issues at Historically Black Women's Colleges

Finally, it is interesting to take a brief look at diversity efforts at a historically black college for women, despite the assumption that such efforts would be unnecessary since the entire student body is already a racial minority. Spelman College (founded in 1881) began its curriculum transformation efforts with a Ford-funded mainstreaming women's studies project in 1983[9] followed by another Ford-funded project to infuse multiculturalism in the liberal arts curriculum. As in other diversity projects on majority campuses, Spelman addressed issues of race/ethnicity, religion, disability, class, and gender. A number of assumptions guided the institution's particular

project which was atypical since most diversity efforts assume an institution whose students and faculty of color constitute a minority on campus: students at "minority" or women's colleges need an inclusive curriculum, as do students at "majority" or co-ed institutions; racial/ethnic groups are not monolithic so that analyzing issues of difference within groups is imperative; while race and class may be dealt with adequately at HBCUs, there are silences about other diversity issues.[10]

Conclusion

While women's colleges have indeed come a long way in dealing with difference, the work is far from over. Review of the research on women's colleges reveals a need for more information about whether there continues to exist a chilly climate for students and faculty of color. Also, there is a need to explore whether there are distinct diversity issues at women's colleges because of these institutions' special missions, unique histories, nature of their student bodies and faculties, and sociocultural realities. The changing demographics at women's colleges highlight a need to devise inclusive curricula which are especially suited for women's colleges as we approach the 21st century.

Finally, there is also a need to aggressively recruit faculty of color and devise strategies for transforming the chilly climate which impacts a number of students who are different from the traditional white, full-time and under 25 student. An important component of the research agenda on women's colleges at the turn of the century must include not just changes in student

enrollment and the situation of racial/ethnic minorities on campus but also analyses of a wide range of diversity issues.

References

American Pluralism and the College Curriculum: Higher Education in a Diverse Democracy. 1997. Washington, DC: AAC&U Publications.

Banks, J. A. & McGee Banks, C.A. 1995. *Handbook of Research on Multicultural Education.* Boston: Macmillan Publishing Company.

Boas, L S. 1935. *Women=s Education Begins: The Rise of Women's Colleges*. Norton, Mass.: Wheaton College Press.

Bowler, Sister M. M. 1933. "A History of Catholic Colleges for Women in the United States." Unpublished Doctoral dissertation. Washington, DC: Catholic University of America.

Butler, J. E. and Walter, J. C., (eds.) 1991. *Transforming the Curriculum: Ethnic Studies and Women's Studies*. Albany: State University of New York Press.

Chamberlain, M. K., (ed.) 1988. *Women in Academe: Progress and Prospects*. New York: Russell Sage Foundation.

Diversity Digest, Fall 1997.

Farnham, C.A. 1994. *The Education of the Southern Belle: Higher Education and Student Socialization in the Antebellum South*. New York: New York University Press.

The Impact of Feminist Research in the Academy. 1987. Bloomington: Indiana University Press.

Friedman, E. G., et al., (eds.) 1996. *Creating an Inclusive Curriculum*. New York: Teachers College Press.

Getting Started: Planning and Organizing Curriculum Transformation Work. Baltimore, MD: Towson State University National Center for Curriculum Transformation Resources on Women.

Guy-Sheftall, B. and Stewart, J. M. 1981. *Spelman: A Centennial Celebration, 1881-1981*, Charlotte, NC: Delmar.

Harwarth, I., Maline, M. and DeBra, E. 1997. *Women's Colleges in the United States: History, Issues, and Challenges.* Washington, DC: U.S. Government Printing Office.

Horowitz, H. L. 1984. *Alma Mater: Design and Experience in the Women's Colleges from Their Nineteenth Century Beginnings to the 1930's*. New York: Knopf.

Kendall, E. 1975. *Peculiar Institutions*. New York: G.P. Putnam's Sons.

Newcomer, M. 1959. *A Century of Higher Education for American Women*. New York: Harper and Brothers.

Noble, J. L. 1956. *The Negro Woman's College Education*. New York: Columbia Teacher's College Press.

Pearson C., Touchton, J.D. and Shavlik, D. (eds.) 1989. *Educating the Majority: Women Challenge Tradition in Higher Education.* New York/London: American Council on Education/ Collier Macmillan.

Read, F. 1961. *The Story of Spelman College.* Princeton: Princeton University Press.

Rossi, A. and Calderwood, A. (eds.) 1973. *Academic Women on the Move*. New York: Russell Sage Foundation.

Schmitz, B. 1992. *Core Curriculum and Cultural Pluralism: A Guide for Campus Planners*. Washington, DC: Association of American Colleges.

Integrating Women's Studies into the Curriculum: A Guide and Bibliography. 1985. Old Westbury, NY: The Feminist Press.

Solomon, B. M. 1985. In the Company of Educated Women: *A History of Women and Higher Education in America.* New Haven: Yale University Press.

White, D. *Achieving Faculty Diversity: Debunking the Myths.*

Women's College Coalition. 1981. *A Study of the Learning Environment at Women's Colleges.* Washington, DC: WCC.

Woody, T. 1929. *A History of Women=s Education in the United States.* 2 vols. New York: The Science Press.

Notes

1. See *Women's Colleges in the United States: History, Issues, and Challenges*, edited by Irene Harwarth, Mindi Maline, and Elizabeth DeBra, Washington, DC: U.S. Department of Education (1997), for a historical retrospective on women's colleges and the most up-to-date statistical portrait (1976-1993) of these 83 women's colleges, which have been classified by the Carnegie Foundation for the Advancement of Teaching as Baccalaureate I, Baccalaureate II, Masters I, and Masters II. They include private, four year institutions (the majority); three public institutions (Mississippi University for Women, and Texas Woman=s University; Douglass College of Rutgers University is not included in their data analysis); two historically Black colleges for women (Spelman and Bennett); and 25 Catholic colleges. Six additional women's colleges (according to the Women's College Coalition) were also not included in their data analysis: Newcomb College, Westhampton College, Hartford College for Women, and William Smith College. Marian Court College and Radcliffe College (now a part of Harvard University) were also excluded. In general, women's colleges are relatively small (most have enrollments of less than 2500); mostly located in the Northeast, especially Massachusetts and Pennsylvania; and primarily undergraduate, though 17 of them grant master's degrees as well. As of 1993 there were 118,880 students enrolled at women's colleges (less than one percent of the more than 14 million students in all colleges and universities), of which 68,234 were full-time, 40,813 were part-time; and men were 3,846 full-time and 5,987 part-time.

2. A Consortium of Women's Colleges, located in Washington, DC, and presently directed by Dr. Marianne Alexander, is an organization that prepares women for public leadership. Its public leadership education network (PLEN), founded in 1978, offers seminars, conferences and internships in Washington, D.C., on the public policy process to women students from women's colleges. At present 21 women's colleges are members of PLEN; they also offer on their campuses courses on leadership and sponsor women's leadership institutes for women in their respective regions.

3. I have made use of the data presented in various tables and the Appendix in *Women's Colleges in the United States* for my observations with respect to diverse student populations at women's colleges. See pp. 48-55 for data on changing enrollment patterns.

4. Since it is not possible to determine the racial/ethnic identity of international students, I

have excluded them from my discussion of this aspect of the diversity question at women's colleges, though I am well aware that the presence of non-U.S. students can contribute immensely to a college's multicultural climate.

5. An excellent on-going source of information about diversity issues in higher education is *Diversity Digest*, a newsletter of the Association of American Colleges and Universities (AAC&U). Its Fall 1997 issue is devoted to faculty issues; this quote appears on p. 7. See also their Web site, *DiversityWeb* http://ww.inform.umd.edu/diversityweb. A helpful video resource about faculty of color is "Shattering the Silences: Minority Professors Break into the Ivory Tower," Pellett Productions, Inc., 32 W. 20th St., New York, NY 10011.

6. A number of publications are helpful with respect to transforming the curriculum, though few focus on women's colleges. See Betty Schmitz, Ellen G. Friedman, et. al. *Creating an Inclusive Curriculum*, New York: Teachers College Press (1996); AAC&U, *American Pluralism and the College Curriculum: Higher Education in a Diverse Democracy*, Washington, DC: AAC&U Publications; *Getting Started: Planning and Organizing Curriculum Transformation Work*, Baltimore, MD: Towson State University National Center for Curriculum Transformation Resources on Women.

7. Research needs to be conducted at Smith to assess the success of their diversity initiatives and what the present status of the institution's stated goals are. I am also aware that the Smith model is not easily replicated at other women's colleges with substantially less resources given the affluence of Smith with respect to endowment and success at fund-raising among their alumnae.

8. Agnes Scott College (founded in 1889, located in the South, and affiliated with the Presbyterian Church) has instituted the Atlanta Semester, a Program in Women, Leadership and Social Change, which is under the directorship of an African American woman who has the distinction of having been awarded one of the first two doctorates in women's studies from Emory University. It also has an international dimension which will culminate in an optional Global Connections study and travel component. During their course work, Atlanta Semester students will study Middle Eastern women who have emigrated to the Atlanta area; the class will study the ways in which their lives have been shaped by the religious, political and social constructs of the Middle East. Students will also have an opportunity to travel to Jordan and Israel to study these women in their cultural homelands. Agnes Scott also has an extensive Return to College Program, like many other women's colleges, which enables adults to matriculate at the College. 14 percent of its 600 students are African American; 2 percent are Hispanic, and 4 percent are Asian American. Like many other small liberal arts colleges in the South, for most of its history it has had no women of color on the faculty. Presently there are women of color on the faculty.

9. In 1981, Spelman established a Women's Research & Resource Center, the first of its kind on a historically Black college, which involved, among other goals, establishing a women's studies minor. Spelman now has the distinction of being the only historically Black college with an undergraduate women's studies major which was approved by the Board in the Fall of 1997.

10. I also assume that since women's colleges are not monolithic, there are varying comfort levels about dealing with particular diversity issues.

Appendix

AAUW Educational Foundation /U.S. Department of Education

Roundtable

A Closer Look at Women's Colleges

Presenters, Moderator, and Participants

Presenters and Moderator

Beverly Guy-Sheftall (Presenter) is the Anna Julia Cooper Professor of English and Women=s Studies at Spelman College, and is the Founding Director of Spelman's Women's Research and Resource Center. She has had a long and distinguished career in the study of Black women in American literature and history. In addition to producing many works of research and publication on the experiences of African American women, she was a founding co-editor of *SAGE: A Scholarly Journal on Black Women*. Dr. Guy-Sheftall has won many award and honors including Spelman's Presidential Faculty Award for outstanding scholarship.

Emily A. Langdon (Presenter) is an Assistant Professor at the Leadership Development and Education at St. Norbert College. At UCLA's Higher Education Research Institute, she used CIRP data to research the backgrounds of women who attended women's college, as well as

studying student satisfaction at these institutions. In addition to conducting research on women at women's colleges, she has also been an administrator at two women's colleges. Dr. Langdon is a former Director of Student Activities at Mount St. Mary's College and Director of Activities and Leadership at Randolph-Macon Woman's College. She earned her Ph.D. in Higher Education and Organizational Change from UCLA.

M. Elizabeth Tidball (Presenter) is Professor Emeritus of Physiology at the George Washington university medical center and distinguished research scholar and co-director of the Tidball Center for the study of Educational Environments at Hood College in Frederick, Maryland. Over the past 30 years she has compiled a significant record of research and publication on environments for the higher education of women, her most recent book (with co-authors Charles Tidball, Lisa Wolf-Wendel, and Daryl Smith) is *Taking Women Seriously*. She was founder and chair of the task force on women in physiology, co-founder of the Women's Studies graduate program at the George Washington University, director of the establishment of the Committee on the Education and Employment of Women in Science and engineering at the National Academy of Sciences and founder of summer seminars for women. Among her many honors and accomplishments she has been a college trustee at Mount Holyoke, Hood, Sweet Briar, Salem, and Skidmore colleges. A graduate of Mount Holyoke College, she earned her M.S. and her Ph.D. from the University of Wisconsin at Madison. In April, 1999, Dr. Tidball was honored by George Washington University with its President's Medal, the highest honor the university can bestow.

Lisa Wolf-Wendell (Presenter) is Assistant Professor of Higher Education in the Department of

Educational Policy and Leadership at the University of Kansas. She has conducted research and presented papers in the areas of women and diversity in higher education, community colleges and the education of women, community-based learning, diversity in faculty, and service learning. She is currently focusing her research on two-year women's colleges. Along with M. Elizabeth Tidball, Charles Tidball, and Daryl Smith, she is a co-author of the recent book *Taking Women Seriously*. She earned her Ph.D. in Higher Education at The Claremont Graduate School.

Tamar March (Moderator) is the Dean of Educational Programs and the Director of Undergraduate Programs at Radcliffe College. In her capacity as Dean she coordinates with Harvard University on issues of common concern and is responsible for co-curricular programs. She has also served as the Vice President for Academic Affairs and Dean of Faculty at New England College, and as an Academic Dean at Hobart and William Smith Colleges. March has been the guest editor of the journal *Liberal Education*, and has served on numerous panels and committees related to higher education. She earned her Ph.D. from Harvard University in Romance Languages and Literature.

Participants

Alice Chandler served sixteen years as President of the State University of New York at New Paltz. She had previously been the Academic Vice President and Provost and Acting President

of the City College of the City University of New York. Among her many awards and honors, she has been a distinguished Fulbright Scholar, a member of the Revson Foundation Board, and has headed accreditation teams for the Middle States Association. She has published several books and articles in the fields of higher education policy and nineteenth-century literature. She has recently written a report on access, inclusion, and opportunity for the American Association of State Colleges and Universities. She earned her Ph.D. from Columbia University.

Florence Fasanelli is the Director of the Strengthening Underrepresented Minority Mathematics Achievement Intervention Programs at the Mathematical Association of America. Her task is to convince mathematics departments at colleges and universities to intervene in the pre-college education of minority students. Previously, she taught mathematics for 30 years at the high school and university levels and later focused on teacher enhancement as a program officer at the National Science Foundation. She has published biographies of women mathematicians. She earned her Ph.D. in mathematics education from The American University.

Barbara A. Hill is the Senior Fellow at the Center for Leadership Development at the American Council on Education in Washington, D.C. She was the President of Sweet Briar College for six years. Before that she was the Provost at Denison University, the Editor of *Liberal Education* for the Association of American Colleges and Universities, and the Associate Dean of Faculty at Barnard College/Columbia University. She has also taught and lectured at Smith, Hood, and Goucher Colleges. She earned her Ph.D. in English from the University of Washington.

Berta Vigil Laden is Assistant Professor in the Department of Educational Leadership at Peabody College, Vanderbilt University. She is a former Spencer Foundation Fellow, Danforth Foundation Fellow, and former Postdoctoral Fellow at the Educational Testing Service. She has won awards from the PEW Charitable Trusts. Her areas of expertise include student diversity in higher education and the experience of Latino students at higher education institutions. She is also widely published on research involving community colleges. She earned her Ph.D. from Stanford University's School of Education.

Linda Marie Perkins is Associate Professor in Educational Foundations at Hunter College. She has formerly taught at the University of Illinois, Champaign-Urbana, and the University of California-Riverside. She has received a Spencer Foundation Grant and been an Exxon Fellow in Social Sciences. She has been the Director of the History of Education Society and National Secretary of the Association of Black Women Historians. She is a national expert on the history of the education of Black women in America, with numerous publications to her credit. She earned her Ph.D. from the University of Illinois, in the History of Education and Higher Education Administration.

Cornelius Riordan is Professor of Sociology at Providence College. Riordan's work on single-sex schools includes, *Girls and Boys in School: Together or Separate,* "Single-Gender Schools: Outcomes for African and Hispanic Americans," and "Sex Groupings and Improving Mathematics Achievement: Lessons from a Comparative Analysis." He has received fellowships from The Johns Hopkins University, the Sloan Foundation, Stanford University, and

the National Endowment for the Humanities. He earned his Ph.D. in Sociology from Syracuse University.

Jadwiga Sebrechts is the Executive Director of the Women's College Coalition (WCC), an organization which represents women's colleges nationwide. The coalition makes the case for these women's colleges and acts as an advocate for the higher education of women. She oversees research on gender issues in higher education, writes on women in math and science, women=s leadership development, single-sex learning environments and gender equity issues in higher education. She has served on advisory boards for National Science Foundation equity initiatives and the improvement of undergraduate science education. She is a member of the ACE's Commission on the Higher Education of Women. She earned her Ph.D. from Yale University.

Charles S. Tidball is Professor Emeritus of Computer Medicine and of Neurological Surgery at The George Washington University. In addition to his many accomplishments as a physician and as a scholar in the field of physiology, he also has made significant contributions to the field of education as a computer scientist. He founded an Educational Computing Technology Program for the Department of Education at The George Washington University, and he was the originator of the Small College Database which contains information on 1,109 four-year colleges. He is currently a co-author, along with his wife, M. Elizabeth Tidball, Lisa Wolf-Wendel, and Daryl Smith, of the recent publication *Taking Women Seriously*. In 1994, they were both appointed Distinguished Research Scholars at Hood College, where they are co-directors of the Tidball Center for the Study of Educational Environments. He earned his Ph.D. in Physiology

from the University of Wisconsin at Madison.

AAUW Board Members and Staff

Maggie Ford is President of the AAUW Educational Foundation. In addition to her role at the Foundation, she is Director of Development at the Village for Families & Children, Inc., a 200-year old organization that provides remediation and intervention services to abused children and families. Prior to this post, Ford spent 25 years in higher education advancement for 2- and 4-year public and private institutions and three state post-secondary systems. As a consultant, Ford specializes in fundraising for small non-profit organizations. Ford received an MAT from the University of New Hampshire and has pursued further graduate study at Boston University.

Pamela Haag is a Senior Research Associate with the AAUW Educational Foundation. Prior to joining AAUWEF she was a postdoctoral fellow at the Pembroke Center for Research on Women, Brown University, and, before that, a fellow at the Rutgers Center for Historical Analysis. She also has received fellowships from the National Endowment for the Humanities and the Mellon Foundation. A book based on dissertation research, *Consent, Sexual Rights, and the Transformation of American Liberalism*, is forthcoming from Cornell University Press. Haag earned her Ph.D. in History from Yale University, where she specialized in American cultural history and gender studies.

Marion Kilson is Program Vice President for the AAUW Educational Foundation. Outside of her AAUW involvement, she is Dean of the Graduate School at Salem State College in Salem, Massachusetts. She has held administrative and faculty positions at several colleges and universities in Massachusetts over the past three decades. Her research and publications center on African and African American societies, as well as women in American higher education. She earned a Ph.D. in social anthropology from Harvard University.

Priscilla Little is the Director of Research Initiatives at the AAUW Educational Foundation. She directs the commissioned Eleanor Roosevelt Fund research projects for the Educational Foundation. Formerly, she was the Director of Programs for the Virginia Foundation for the Humanities, Division of State Programs, national Endowment for the Humanities in Charlottesville, Virginia. She is currently a member of the steering committee of Woman Administrators in Higher Education and has served as chair for The George Washington University Ecumenical Council. She holds an M.A. from the University of Virginia.

Karen Sloan Lebovich is Director of the AAUW Educational Foundation. In this capacity, Lebovich is responsible for directing the AAUW Educational Foundation=s fellowship, grant, research, program, development, and fundraising efforts, and overseeing the Foundation=s $100 million in assets. The AAUW Educational Foundation issues more than $2.7 million in fellowships and grants each year. Lebovich has held a variety of leadership positions in the nonprofit sector, higher education, and government, including posts at American University, the League of Women Voters and the National Science Foundation. She earned her B.A. from

Simmons College.

Janice Weinman is the former Executive Director of the American Association of University Women (AAUW), AAUW Educational Foundation, and AAUW Legal Advocacy Fund. She is currently working on legislative issues for the U.S. Department of Education. Prior to joining AAUW, she was executive vice president of the College Board, where she created the nationally recognized Pacesetter program to help all students prepare for the transition from high school to college. Weinman also served as the vice president of academic affairs at the Fashion Institute of Technology, special assistant to the U.S. Commissioner of Education, and director of the Office of Executive Planning and Bureau of Research and Assessment of the Massachusetts Department of Education. Weinman earned her Ed.D. from Harvard University.

U.S. Department of Education

Irene Harwarth is with the National Institute on Postsecondary Education, Libraries, and Lifelong Learning (PLLI) at the U.S. Department of Education. At PLLI, she develops in-house research reports, monitors several research projects, and is coordinating a fellowship program. Her past publications have included: *Historical Trends: State Education Facts, 1969 to 1989,* and *Degrees in Science and Mathematics: National Trends and State-by-State Data*. Her latest report, *Women=s Colleges in the United States: History, Issues, and Challenges,* came out in June 1997. She earned her Ph.D. in public administration from The George Washington University.

Carole B. Lacampagne is the Director of the National Institute on Postsecondary Education, Libraries, and Lifelong Learning (PLLI) of the Office of Educational Research and Improvement (OERI) at the U.S. Department of Education. She sets the Department's research and development agenda for postcompulsory education. She is responsible for overseeing OERI's research and development centers in the areas of postsecondary education and adult learning and literacy. Dr. Lacampagne came to the Department in 1991 from the National Science Foundations where she was a Visiting Scientist, on leave from the Department of Mathematical Sciences, Northern Illinois University. She earned her Ph.D. from Teacher's College at Columbia University.